



LSU

Discover
Undergraduate Research

Discover Day

March 19, 2015

Discovery ◉ Creativity ◉ Research

10:00 a.m.-1:00 p.m. Open to the public
1:30-3:30 p.m. Student presentations

LSU Union | Royal Cotillion Ballroom

Welcome to LSU Discover Day 2015!

LSU Discover Day is a university-wide undergraduate showcase that provides a platform for students from all disciplines to share their research and creative projects with the entire university. Student presentations include scientific posters and visual art exhibitions. This event allows the LSU community a chance to publicize and reflect on campus-wide undergraduate student success in discovery, creativity, and research.

About LSU Discover

LSU Discover is a program under the LSU Office of Academic Affairs, which promotes undergraduate research and creative opportunities to students from all disciplines. Through mentored research with faculty, workshops, and special events, the LSU Discover program focuses on information literacy, original ideas, research methods, research ethics, and communication.

LSU Discover promises to be an extraordinary experience that will provide lifetime benefits for students. The program will provide students with the knowledge and skills that will enhance their undergraduate experience and help all students to become stronger, more successful graduates and professionals. There are also the benefits accrued through mentorship—a student's opportunity to learn with an experienced, published researcher. Additionally, students may have the chance to obtain internships in their fields of study with prestigious firms. Students could be selected to travel to exotic locations to do research.

The LSU Discover program is the Quality Enhancement Plan, which is part of LSU's reaffirmation of accreditation by SACSCOC, the Southern Association of Colleges and Schools Commission on Colleges.

To learn more about LSU Discover, visit the website at lsu.edu/discover.

Stage



Food & Beverage

Exit

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Attendee Check-in



Entrance

- College of Agriculture: #20-30
- College of Art & Design: #10-17
- School of the Coast & Environment: #1-6
- College of Engineering: #86-103
- College of Human Sciences & Education: #31-56
- College of Humanities & Social Science: #104-112
- Manship School of Mass Communication: #7-8
- College of Science: #57-85

College of Agriculture

#	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
20	Ariel Bergeron	A Method to Rear 0 to 21 Day Old Bobwhite Quail	Theresia Lavergne
21	Colette Childress ^H	Lifestyle Behaviors in Early Adulthood May be Important Risk Factors for Age-Related Macular Degeneration	Carol Lammi-Keefe
22	Alexis Dufrene	Can Probiotic Bacteria Survive in a Beverage of Acid Whey? <i>[Team Members: Doug Olson, Dasom Park]</i>	Kayanush Aryana
23	Matthew Landry ^{H S}	A Comparison of Nutrient Intake/Adequacy, Diet Quality, and Obesity in Low-Income Children [2-18 y] that Participated or did not Participate in the Supplemental Nutrition Assistance Program (SNAP): NHANES 2003-2010	Carol O'Neil
24	Rion Mooneyham	Variability of Storage Root Yield, Size, and Shape of Sweet Potato Mericlones	Don Labonte
25	Maria Moore	Impact of the Microbiome on Cocoa Fiber and Polyphenolic Compounds	John Finley
26	Jorge Prado	Platform Technology for Gene Therapy and DNA Vaccination	Richard Cooper
27	Morgan Richard	Validation of a Commercially Available Beta-hydroxybutyrate Meter for Assessing Rumen Development in Dairy Calves	Cathleen Williams
28	Jamie Tairov	The 2014 Farm Bill Crop Insurance Changes and its Effect on Farm Household Labor Decisions	Ashok Mishra
29	Carly Thaxton ^H	DHA/EPA Consumption by Pregnant Women in Louisiana	Carol Lammi-Keefe
30	Brittany Zawodniak ^H	Examining Junior High and High School Students' Willingness to Consume Foods and Beverages Recommended by the 2010 Dietary Guidelines for Americans	Georgianna Tuuri

College of Art & Design

#	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
17	Brittany Basco	The Body and Mind	Kelly Tate
16	Meghan Bilski	Home of the Souls	Jason Crow
15	Harrison Daigle	Natural Tension	Jason Crow
14	Tyler Detiveaux	Toward a Natural Architecture	Jason Crow
13	Nathaniel Frank	The Critical Vernacular Component	Jason Crow
12	Christopher James ^H	CRMS Reimagined	Jori Erdman
11	Callea McGehee ^H	A Graceful Building: The Quest to Discover a Graceful Architecture	Jason Crow
10	Erin Percevault ^{H S}	Declaring Independence: The American Energy Revolution	Forbes Lipschitz

S denotes LSU Discover Scholar

H denotes Honors College Student

School of the Coast & Environment

#	Student	Title	Mentor
1	Frances Arinze ^H	Identifying Pathogenic Bacteria from Avian Cloacal and Fecal Samples Using Multiplex PCR	Crystal Johnson
2	David Fertitta ^{H S}	Assessing the Impacts of Nutrient Load Reduction Scenarios on the Extent and Severity of Hypoxia in the Northern Gulf of Mexico	Dubravko Justic
3	Jamal Mathurin	Comparison of Phytoplankton Community Composition in Two Coastal Louisiana Estuaries <i>[Team Member: Melissa Baustian]</i>	Sibel Bargu
4	Matt Novak	The Relationship Between Relative Elevation and Belowground Biomass of an Oligohaline Marsh Restoration Through the Utilization of Dredged Material	Irving Mendelssohn
5	Patrick Robichaux ^H	The Depositional History of West Bay, LA, and the Effects of Polymers on Sediment Erodibility	Kehui Xu
6	Sarah Wood	Zooplankton Biomass Calculation Assessment Using Image Analysis Techniques	Rosana DiMauro

College of Engineering

#	Student	Title	Mentor
86	Joseph Bresowar ^H	Open-Jet Wind Simulator	Aly Moussad
87	Giuliano Campesi ^H	Spilled Oil Evaporation and Sinking	Louis Thibodeaux
88	Jared DeSoto ^H	Study of Electrospray Assisted Electrophoretic Deposition of Carbon Nanotubes on Insulator Substrates	Theda Daniels-Race
89	Aaron Faulkner ^H	Comparing the Performances of Controllers Under Time Delays Using a Rotary Servo Plant	Marcio de Queiroz
90	Michael Fertitta	Boron Nanoparticles for Enhancement of Bio-Fuel Combustion/ Polymerization and Reactive Extrusion of Poly [Succinimide]	Kerry Dooley
19	Kimberly Koehl	Impact of Recycling Agents on the Design of Asphalt Mixtures Containing Roofing Shingles	Louay Mohammad
91	Gerald Knapp ^H	Use of Provenance Data Management System for K-Edge Analysis of Flame Retardant X-Ray Tomography	Les Butler
92	Kristopher Meche	Heat Transfer Simulation for Selective Laser Melting Powder Layers	Shengmin Guo
93	Zackari Murphy ^H	Bone Scaffolds Utilizing Frontal Polymerization	Daniel Hayes
94	Austin Ober	Launch and Glide Development Program <i>[Team Members: Benjamin Argeanto, Connor Joslin^H]</i>	Adam Baran
95	Kelly O'Quinn	Development of a Flow-Free Microfluidic Gradient Generator	Adam Melvin
96	Brandon Oubre ^H	Development of Inexpensive Educational Robotics Tools	Supratik Mukhopadhyay
97	Lance Phelps	A Static Microdroplet Array for Highly Sensitive Biomolecule Detection <i>[Team Members: Christian Danielson, Gavin Pappas^H]</i>	Kidong Park
98	Craig Richard ^H	Bioconjugated Gold Nanoparticles for E-Cadherin Targeting in MCF-10A Cells	Rohit Bhargava
99	Kurt Ristroph ^H	Plant-Nanomaterial Interaction: Zein Nanoparticle Interactions with Soybean Plants, Roots, and Leaves, Measured Fluorometrically	Cristina Sabliov
100	Briana Saul	Performing/Conducting Lean Events in the Public Sector	Laura Ikuma
101	Christopher Sylvester ^H	Nanoparticles as a Vehicle for Selective Antimicrobial Surfactants <i>[Team Member: Katie Hogan^H]</i>	Daniel Hayes
102	Long Vu	Correlation of Indentation Hardness and Compressive Strength of Oil Well Cement Paste <i>[Team Member: Jacob Haffner]</i>	Mileva Radonjic
103	Jon Wilson ^H	Surface Area Analysis of Copper Electrodes for Electrocatalytic Reduction of CO ₂	Gregory Griffin

College of Human Sciences & Education

#	Student	Title	Mentor
31	Megan Barrilleaux	Will Pre-Printed Response Cards Increase the On-Task Behavior of a 5-year Old Girl?	Cynthia DiCarlo
32	Karah Bergeron	Increasing Hand Raising During Whole Group Instruction	Cynthia DiCarlo
33	Madison Blackford	Increasing Letter Recognition and Phonemic Awareness Using a Multi-Sensory Intervention	Cynthia DiCarlo
34	Carlye Breuhl	Decreasing Socially Inappropriate Initiations During Center-Based Instruction	Cynthia DiCarlo
35	Abbie Brown	Increasing Child Attention During Whole Group in Kindergarteners	Cynthia DiCarlo
36	Alexis Canseco	Using Planned Ignoring to Increase Hand Raising During Whole Group Instruction on a Kindergarten Aged Child	Cynthia DiCarlo
37	Roni Carver	Socially Appropriate Behavior Using Positive Reinforcement and Planned Ignoring	Cynthia DiCarlo
38	Tabitha Dalgo	Increasing Socially Appropriate Behavior in a Pre-Kindergarten-Aged Child Using Positive Feedback	Cynthia DiCarlo
39	Melissa Davis	Teacher Made Assessment	Cynthia DiCarlo
40	Mary Elizabeth DeRouen	Increasing Socially Appropriate Interactions with Peers in Preschoolers	Cynthia DiCarlo
41	Katie Duhon	Increasing On-Task Behavior Through a Fixed-Time Attention Intervention	Cynthia DiCarlo
42	Lakeisha Fair	Using Least-to-Most Prompting to Increase Compliance to Verbal Directions	Cynthia DiCarlo
43	Meghna Gopal	Increasing Socially Appropriate Behavior with Peers	Cynthia DiCarlo
44	Erin Hebert	Increasing Attention During Whole Group in Kindergarteners	Cynthia DiCarlo
45	Caroline Hulin	Increasing Attention During Whole Group in Pre-Kindergarteners	Cynthia DiCarlo
46	Shandricka Jackson	Education and Race Case Law and Legislation from 1862-Present: Implications for Career and College Readiness of African American Students	Jennifer Curry
47	Tremelia Kelly	Cardiopulmonary Rehabilitation, Treatment Motivation, Patient Compliance, and Mental Health	Jennifer Curry
48	Sarah Odom ^s	Does Stress Always Affect Fine Motor Performance Negatively? <i>(Team Member: Christopher Aiken)</i>	Arend Van Gemmert
49	Sari Pipes	Shoe Tying in Preschool	Cynthia DiCarlo
50	Brooke Price	Increasing Shoe Tying Behavior by Using Task Analysis Picture Schedule in a Preschool-Aged Child	Cynthia DiCarlo
51	Michael Sarrazin	Using Planned Ignoring to Increase Social Appropriate Behavior in a Kindergarten-Aged Girl	Cynthia DiCarlo
52	Kristen Schulz	Increasing On-Task Behavior Using If-Then Planning	Cynthia DiCarlo
53	Kaitlyn Strecker	Increasing Socially Appropriate Behavior Through Coaching	Cynthia DiCarlo
54	Katherine Sylvest	Factoring College Decision Making Maturity: A Case Study of College Bound Students and How They Made Their Choices	Jennifer Curry
55	Tina Vincent	Enhanced Alphabet Knowledge	Cynthia DiCarlo
56	Jenn Winston	Increasing On-Task Behavior During Center Time in a Preschool-Aged Boy	Cynthia DiCarlo

College of Humanities & Social Science

#	Student	Title	Mentor
104	Brooksie Chastant	The South African Constitutional Court and Regime Response, 1994-2014	Stacia Haynie
105	Margaret Crocker	Using Smartphone Apps to Measure Sound Pressure Level	Neila Donovan
106	Sonia Dudgaonkar	Plant Mediated Interactions Among Adult Male and Female Rice Water Weevils	Michael Stout
107	Zachary Fitzpatrick ^H	Gene Therapy & Orphan Drugs: The Ethics of Development and Distribution	Cecil Eubanks
108	Hailey Guillot	Working Memory and Word-Learning Abilities in Multilingual Adults Who Stutter: a Preliminary Study	Geoffrey Coalson
109	David Judd ^H	Autonomous Pigs	James Rocha
110	Anna Leger ^H	Reasonable Expectation of Privacy: Is Government Surveillance a Crucial Tactic in the Fight Against Terrorism or an Orwellian Infringement of Civil Liberties?	Leonard Ray
111	Jessica Schexnayder	Mapping Louisiana's Coastal Zone Cemeteries	Mary Manhein
112	Charlotte Willcox	Oral History of the New Orleans Jazz & Heritage Festival [Team Member: Elizabeth Gelvin]	Jennifer A. Cramer Helen Regis

Manship School of Mass Communication

#	Student	Title	Mentor
7	Danielle Kelley	Social Media and the Church	Lisa Lundy
8	Lyle Currier	Capital Area CASA Assocation Research Proposal [Team Members: Madeline Engler ^H , Ashley Estave, Michael Grob, Nichole Wierschem]	Kasey Windels

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College of Science

#	Student	Title	Mentor
57	Denzel Alexander	Self-Assembly of Octadecyltrichlorosilane and Alkanethiol Monolayers on Silicon and Gold Substrates Studied with Atomic Force Microscopy	Jayne Garno
58	Mary Balhoff ^H	Modeling X-ray Absorption in α -SiO ₂ with Time-Dependent Density Functional Theory	Kenneth Lopata
59	Laura Bertrand	Genetic Test of Inhibition of CYCD3-Containing Cyclin Dependant Kinase Complexes by SIAMESE	John Larkin
60	Madison Boudreaux ^H	Adaptive Responses of Mustard Family Plants to Ammonium Salt Toxicity	Maheshi Dassanayake
61	Viet Dao	Short-term Effects of Herbicides and Prescribed Fire on Restoration of Shrub-Encroached Pine Savannas [Team Members: Emily Babl, James Hebert ^H , Claire Labarbera, Similoluwa Ogundare]	William Platt
62	Rene Girard	Particle Lithography Studies	Jayne Garno
63	Grace Hunt ^H	Optimizing the Concentration of a High Rain Volume through a Tangential Flow Filtration System	Brent Christner
64	Matthew Johnson	Evolutionary Analysis of SIAMESE and SIAMESE-Related Genes	Maheshi Dassanayake
65	Dante Johnson	Characterization of Xanthine Dehydrogenase Regulator Protein of <i>Ralstonia solanacearum</i> , a Tomato Infecting Bacterium	Anne Grove
66	Taylor Judice	Signatures of Martian Magmatic Evolution Within the Greater Thaumasia Plateau	Suniti Karunatilake
67	Ross Kelt	Halotropism of <i>Arapidopsis</i> and <i>Shrenkiella parvula</i>	Maheshi Dassanayake
68	Nikka Khorsandi ^H	Comparative Analysis of the Alligator [<i>Alligator mississippiensis</i>] and Chicken [<i>Gallus gallus domesticus</i>] Retinas	Evanna Gleason
69	Michelle Laskowski	Effects of Structure on Spectra of Periodic Quantum Graphs	Stephen Shipman
70	Shannon McDuff ^H	Novel Extremely Halophilic Euryarchaeota Provide New Insights about Respiratory CO Metabolism	Gary King
71	Everett Moser	Distributional Solutions of Linear, Second Order, Ordinary Differential Equations	Frank Neubrandner
72	Todd Moulder	Exploiting Boson Probability Distributions in Staggered Beam Splitter Arrays	Jonathan Dowling
73	Joonwoo Nho ^H	Hypomethylation of Retrotransposons Driven by Oncogenic KRAS & Genomic Analysis with Bioinformatics	Joomyeong Kim
74	Nouriath Ningbinnin	Biphasic Phosphorylation of STAT3 and STAT5 in Adipocytes	Jacqueline Stephens
75	Erin Oliver	Evidence for Microbial Life in the Matanuska Glacier: an Analog for Habitats on Icy Worlds [Team Members: Shawn Doyle, Jennifer Farrar, Heather Lavender]	Brent Christner
76	Alexis Payne	Altered Metabolite-Related Gene Expression Profiles in an <i>nsdC</i> Knockout Mutant of <i>Aspergillus flavus</i>	Matthew Gilbert
77	David Pitre	Implementation of Flow Cytometry-Based Microbial Quantification in a High-Throughput Culturing Workflow	Cameron Thrash
78	Colleen Robichaux	K-Knuth Equivalence for Increasing Tableaux	Frank Neubrandner
79	James Smith	Long-Term Accretion and Sediment Accumulation Patterns from Hurricane Surge within the Breton Sound Estuary System Over the Past 70 Years	Sam Bentley
80	Eleanor Smith	Metamorphic Conditions of Mid-Lower Crustal Metapelites from the Sawtooth Metamorphic Complex, Idaho	Barbara Dutrow

81	Sierra Sossamon ^H	Effects of Antioxidant Supplementation and/or Exercise on Catalase Activity in Liver and Muscles of GFAP-APOE Mice	Nathalie Sumien
82	David Susko	Chemical Provinces Reveal Elysium Volcano's Compositional Evolution	Suniti Karunatilake
83	Kieu Nga Tran	Salt-Accelerated Flowering of a Halophyte <i>Schrenkiella parvula</i> [Team Member: John Johnson ^H]	Dong-Ha Oh
84	Jessica Weckhorst	Effect of Humic Acid as a Sole Carbon Source on Marine Microbes from the Coastal Area Surrounding Louisiana	Cameron Thrash
85	Cedric Williams ^H	Development of an Improved Proportional Counter for ANASEN	Catherine Deibel

McNair Scholars

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108	Hailey Guillot	Working Memory and Word-Learning Abilities in Multilingual Adults Who Stutter: A Preliminary Study	Geoffrey Coalson
46	Shandricka Jackson	Education and Race Case Law and Legislation from 1862-Present: Implications for Career and College Readiness of African American Students	Jennifer Curry
64	Matthew Johnson	Evolutionary Analysis of SIAMESE and SIAMESE-Related Genes	Maheshi Dassanayake
72	Todd Moulder	Exploiting Boson Probability Distributions in Staggered Beam Splitter Arrays	Jonathan Dowling

Office of Strategic Initiative Scholars

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107	Zachary Fitzpatrick ^H	Gene Therapy & Orphan Drugs: The Ethics of Development and Distribution	Cecil Eubanks
65	Dante Johnson	Characterization of Xanthine Dehydrogenase Regulator Protein of <i>Ralstonia solanacearum</i> , a Tomato Infecting Bacterium	Anne Grove
98	Craig Richard ^H	Bioconjugated Gold Nanoparticles for E-Cadherin Targeting in MCF-10A Cells	Rohit Bhargava
85	Cedric Williams ^H	Development of an Improved Proportional Counter for ANASEN	Catherine Deibel

Special Thanks

LSU Discover would like to give special thanks to all of the individuals and groups who contributed to the success of LSU Discover Day 2015. Special gratitude is extended to Dr. Gil Reeve, Associate Vice President for Academic Planning and Institutional Effectiveness for the LSU System, Dr. Randy Duran, Director of the Office of Undergraduate Research, and Dr. Kalliat Valsaraj, Vice President for Research & Economic Development.

Warm thanks to faculty mentors for their hard work, dedication to students, and efforts to inspire the next great generation of researchers and creative thinkers.

Thank You

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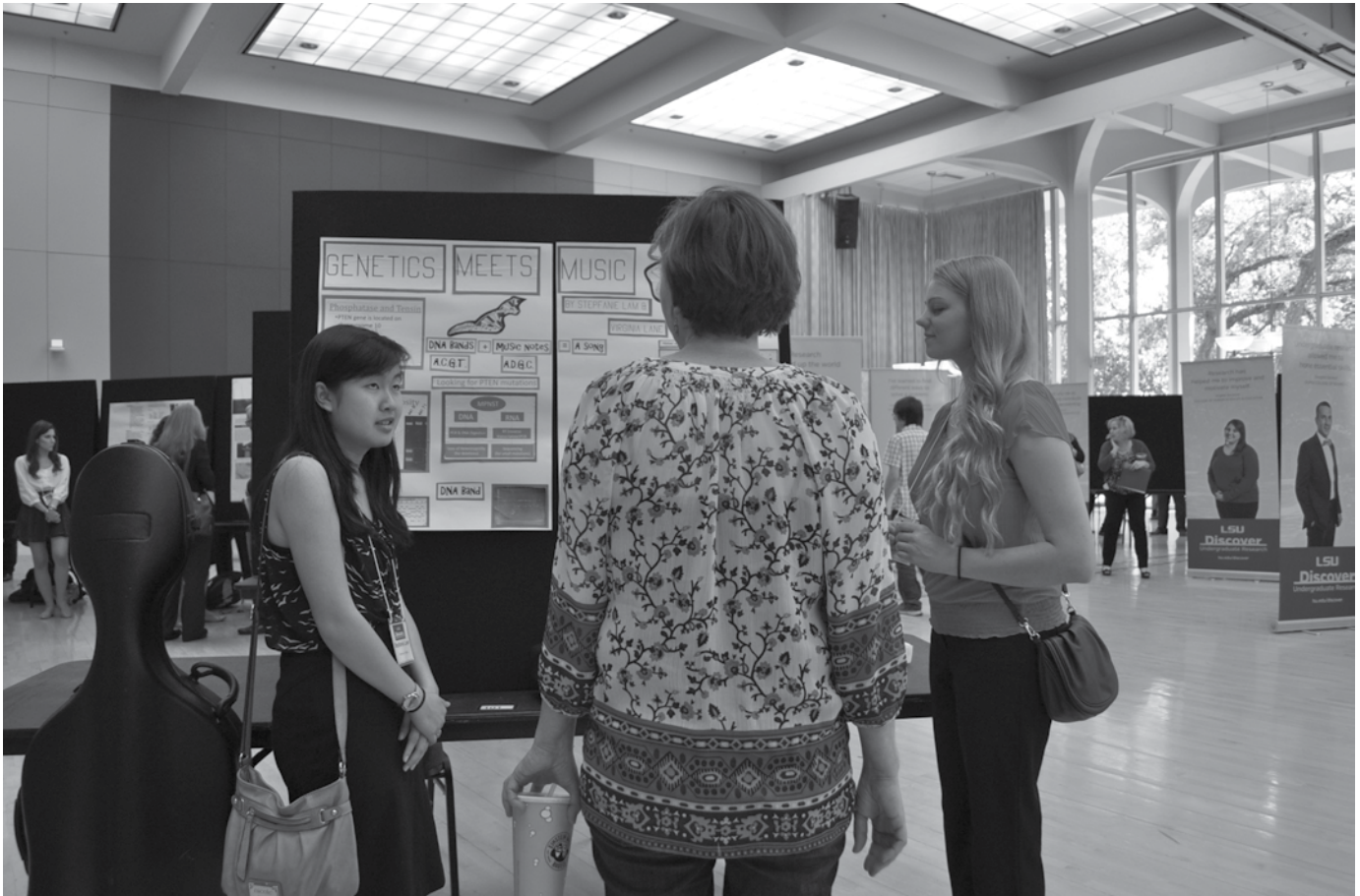
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