



16TH ANNUAL

Research in the Rotunda

Showcasing the Work of
UW Undergraduates



CAPITOL ROTUNDA MADISON, WI APRIL 17, 2019

16TH ANNUAL

Research in the Rotunda

Showcasing the Work of UW Undergraduates

wisconsin.edu/research-in-the-rotunda

facebook.com/uwsystem

[#RITR2019](https://twitter.com/uwsystem)

16TH ANNUAL

RESEARCH IN THE ROTUNDA

April 17, 2019

CONTENTS

From the President	1
Board of Regents	3
Chancellors	4
Branch Campus Administrators/CEOs	5
Faculty Advisers	6
Student Presenters	
Alphabetical by UW Campus	9
By Legislative District	18

SCHEDULE INFORMATION

10:30AM-2:30PM – POSTERS DISPLAY, CAPITOL ROTUNDA

12PM – REMARKS, CAPITOL ROTUNDA

Speaker: Ray Cross, President, University of Wisconsin System

FROM THE PRESIDENT



Dear Education Partner,

Welcome to the UW System's 16th annual *Research in the Rotunda: Showcasing the Work of UW Undergraduates*. We are proud to highlight the research achievements of our undergraduate students for the general public and the state legislature.

The research projects on display embody the personal and intellectual growth the students who created them have experienced. They are a tangible representation of our ongoing commitment to build the talent pipeline and to expand knowledge and ideas that are instrumental to the state's success.

Through partnering with our accomplished faculty, each student has a rewarding opportunity to enhance their critical problem-solving skills and develop their project management and teamwork skills. Students investigated real-life issues affecting local, state, national, and international citizens and communities. Engaging in undergraduate research is a proven practice that leads to student success, not only in school but also in future careers. The students' research also has the potential to inform public policy and decisions made by the private sector to help resolve the complex challenges our local, state, and global communities face.

This research is a reminder that the UW System, our students, our institutions, and our faculty and staff are the engines that drive Wisconsin's economy and deliver a significant return on investment. Experts estimate that the UW System has a \$24+ billion impact on Wisconsin's economy every year.

We extend our appreciation to those who made this annual event possible, and we offer a special thanks to Wisconsin's elected representatives for their participation and support. We also offer congratulations to the families, community supporters, and UW faculty advisers and staff who were significantly involved.

Most importantly, we congratulate the talented students whose work represents the significant and valuable role undergraduate research plays throughout the UW System and beyond. Their efforts to extend knowledge beyond the boundaries of campus and to stimulate society through their research exemplify the Wisconsin Idea and make us all very proud of them, our university system, and our state.

Cordially,

A handwritten signature in black ink that reads "Ray Cross". The signature is fluid and cursive, with the first letters of "Ray" and "Cross" being capitalized and prominent.

Ray Cross
President

BOARD OF REGENTS

Regent Robert Atwell

Regent John Robert Behling, *President*

Regent Scott Beightol

Regent José Delgado

Regent Michael M. Grebe

Regent Eve Hall

Regent Mike Jones

Regent Tracey L. Klein

Regent Regina M. Millner

Regent Janice Mueller

Regent Drew Petersen, *Vice President*

Regent Cris Peterson

Regent Jason R. Plante

Regent Ryan L. Ring

Regent Carolyn Stanford Taylor

Regent Torrey Tiedeman

Regent S. Mark Tyler

Regent Gerald Whitburn

CHANCELLORS

Chancellor James Schmidt
University of Wisconsin–Eau Claire

Chancellor Gary L. Miller
University of Wisconsin–Green Bay

Chancellor Joe Gow
University of Wisconsin–La Crosse

Chancellor Rebecca Blank
University of Wisconsin–Madison

Chancellor Mark Mone
University of Wisconsin–Milwaukee

Chancellor Andrew J. Leavitt
University of Wisconsin–Oshkosh

Chancellor Deborah Ford
University of Wisconsin–Parkside

Chancellor Dennis J. Shields
University of Wisconsin–Platteville

Chancellor Dean Van Galen
University of Wisconsin–River Falls

Chancellor Bernie L. Patterson
University of Wisconsin–Stevens Point

Chancellor Bob Meyer
University of Wisconsin–Stout

Chancellor Renée Wachter
University of Wisconsin–Superior

Chancellor Cheryl Green (interim)
University of Wisconsin–Whitewater

CAMPUS ADMINISTRATORS/CEOS

Brittany Nielsen

University of Wisconsin–Eau Claire - Barron County

Rachele Bakic

University of Wisconsin–Green Bay, Manitowoc Campus

Cynthia Bailey

University of Wisconsin–Green Bay, Marinette Campus

Jennifer Williamson-Mendez

University of Wisconsin–Green Bay, Sheboygan Campus

Stephen Schmid

University of Wisconsin–Milwaukee at Washington County

University of Wisconsin–Milwaukee at Waukesha

Bethany Rusch

University of Wisconsin–Oshkosh, UW-Fond du Lac campus

Bill Bultman

University of Wisconsin–Oshkosh, UW-Fox Valley campus

Ed Janairo

University of Wisconsin–Platteville Baraboo Sauk County

Brandon Fetterly

University of Wisconsin–Platteville Richland

Michelle Boernke

University of Wisconsin–Stevens Point at Marshfield

Ann Herda-Rapp

University of Wisconsin–Stevens Point at Wausau

Kristin Fillhouer

University of Wisconsin–Whitewater at Rock County

FACULTY ADVISERS

Student research cannot occur without the dedication and personal commitment of faculty advisers. We wish to acknowledge the following faculty members for their work to make undergraduate research collaboration possible on every UW campus.

Faculty Adviser	Campus	Poster	Legislative District Senate/Assembly	
Amy Eliot	UW-Superior	1	25	73
Elisabeth Harrahy	UW-Whitewater	1,5	15	43
David Soll	UW-Eau Claire	2	31	91
Colin Belby	UW-La Crosse	3	32	95
Roger Haro	UW-La Crosse	3	32	95
Carmen Thiel	UW-Oshkosh	4	18	54
Nels Paulson	UW-Stout	5	10	29
Gokul Gopalakrishnan	UW-Platteville	6, 62	17	49
Mark Levenstein	UW-Platteville	6, 62	17	49
Patrick Forsythe	UW-Green Bay	7	30	88
Patricia Terry	UW-Green Bay	8	30	88
Mark Klemp	UW-Green Bay, Marinette Campus	8	30	89
Renee Richer	UW-Green Bay, Marinette Campus	8	30	89
Dan Dembkowski	UW-Stevens Point	9	24	71
Daniel Isermann	UW-Stevens Point	9	24	71
Austin Polebitski	UW-Platteville	10	17	49
Stephen Swallen	UW-Platteville Baraboo Sauk County	10	27	81
Douglas Olson	UW-Eau Claire	11	31	91
Jennifer Johs-Artisensi	UW-Eau Claire	11	31	91
Kevin Hansen	UW-Eau Claire	11	31	91
Matthew Jewell	UW-Eau Claire	12	31	91
Jason Spraitz	UW-Eau Claire	13	31	91
Sarah Vitale	UW-Eau Claire	14	31	91
Laura Suppes	UW-Eau Claire	15	31	91
Andrew Sturtevant	UW-Eau Claire	16	31	91
Daniel Ott	UW-Eau Claire	16	31	91
Lisa Grubisha	UW-Green Bay	17	30	88
Brian Merkel	UW-Green Bay	18	30	88
Gaurav Bansal	UW-Green Bay	19	30	88
Ankur Chattopadhyay	UW-Green Bay	20	30	88
Timothy Kaufman	UW-Green Bay	21	30	88
Kimberley Reilly	UW-Green Bay	22	30	88
Rebecca Abler	UW-Green Bay, Manitowoc Campus	23	9	25
Richard Hein	UW-Green Bay, Manitowoc Campus	23	9	25

Faculty Adviser	Campus	Poster	Legislative District Senate/Assembly	
Christine Hippert	UW-La Crosse	24	32	95
Dan Grilley	UW-La Crosse	25	32	95
Todd Weaver	UW-La Crosse	25	32	95
Aileen Staffaroni	UW-La Crosse	26	32	95
Omar Granados	UW-La Crosse	27	32	95
Eric Strauss	UW-La Crosse	28	32	95
Basudeb Bhattacharyya	UW-La Crosse	29	32	95
John May	UW-La Crosse	29	32	95
Patricia Devine	UW-Madison	30	26	77
William Cox	UW-Madison	30	26	77
Helen Blackwell	UW-Madison	31	26	77
Leann Tigges	UW-Madison	32	26	77
Gloria Hawkins	UW-Madison	33	26	77
Xinyu Zhao	UW-Madison	33	26	77
Yu Gao	UW-Madison	33	26	77
Lisa Bratzke	UW-Madison	34	26	77
Edward Hubbard	UW-Madison	35	26	77
Yunji Park	UW-Madison	35	26	77
Rachel Ida Buff	UW-Milwaukee	36	7	19
Michael Newman	UW-Milwaukee	37	7	19
Mustafa Hussein	UW-Milwaukee	38	7	19
Krista Lisdahl	UW-Milwaukee	39	7	19
Sabine Heuer	UW-Milwaukee	40	7	19
Karyn Frick	UW-Milwaukee	41	7	19
Gregg Jamison	UW-Milwaukee	42	33	98
Michael Pauers	at Waukesha UW-Milwaukee	43	33	98
Maria Novotny	UW-Oshkosh	44	18	54
Lisa Dorn	UW-Oshkosh	45	18	54
Colin Long	UW-Oshkosh	46	18	54
Nadia Kaltcheva	UW-Oshkosh	47	18	54
Eric Hiatt	UW-Oshkosh	48	18	54
Jordan Karsten	UW-Oshkosh	49	18	54
Warren Vaz	UW Oshkosh, UW-Fox Valley campus	50	19	57
Erin DeMuynk	UW-Oshkosh, UW-Fox Valley campus	51	19	57
Jessica Orlofske	UW-Parkside	52	22	64
Melissa Gregg	UW-Parkside	53	22	64
Francis Mann	UW-Parkside	54	22	64
William Parker	UW-Parkside	55	22	64
Robert Barber	UW-Parkside	56	22	64
Dana Oswald	UW-Parkside	57	22	64
Becky Doyle-Morin	UW-Platteville	58	17	49
Gretchen Bohnhoff	UW-Platteville	59	17	49
Suboh Alkushayni	UW-Platteville	60	17	49
Mohammad Rabbani	UW-Platteville	61	17	49

Faculty Adviser	Campus	Poster	Legislative District Senate/Assembly
James Hamilton	UW-Platteville	62	17 49
Gokul Gopalakrishnan	UW-Platteville	6, 62	17 49
Mark Levenstein	UW-Platteville	6, 62	17 49
Kameko Halfmann	UW-Platteville	63	17 49
Noah Anderson	UW-Platteville	64	27 81
	Baraboo Sauk County		
Aharon Zorea	UW-Platteville	65	17 50
	Richland		
Surujhdeo Seunarine	UW-River Falls	66	10 30
Steven Livingstone	UW-River Falls	67	10 30
James Cortright	UW-River Falls	68	10 30
Amy Radunz	UW-River Falls	69	10 30
Natasha Macnack	UW-River Falls	70	10 30
Kevyn Juneau	UW-River Falls	71	10 30
Jeff Dimick	UW-Stevens Point	72	24 71
Justin VanDeHey	UW-Stevens Point	72	24 71
Shelli Dubay	UW-Stevens Point	72	24 71
Diane Caporale	UW-Stevens Point	73	24 71
Jacob Straub	UW-Stevens Point	74	24 71
Ron Masters	UW-Stevens Point	74	24 71
Nikolaus Butz	UW-Stevens Point	75, 76	24 71
Jennifer Collins	UW-Stevens Point	77	24 71
Kimmery Newsom	UW-Stout	78	10 29
Matthew A. Ray	UW-Stout	79	10 29
Tina Lee	UW-Stout	80, 82, 83	10 29
Sylvia Tiala	UW-Stout	81	10 29
Zach Raff	UW-Stout	83	10 29
Jenean O'Brien	UW-Superior	84	25 73
Maria Stalzer Wyant	UW-Superior	85	25 73
Cuzzo			
Ephraim Nikoi	UW-Superior	86	25 73
Lynn Goerd	UW-Superior	87, 89	25 73
Sakib Mahmud	UW-Superior	88	25 73
Patricia Beech-Dziuk	UW-Superior	89	25 73
Andrea Ednie	UW-Whitewater	90	15 43
Jason Shurley	UW-Whitewater	90	15 43
Rachel Wood	UW-Whitewater	91	15 43
Laura Porterfield	UW-Whitewater	92	15 43
Bill Miller	UW-Whitewater	93	15 43
Sungchul Lee	UW-Whitewater	94	15 43
Daniel Zamzow	UW-Whitewater	95	15 44
	at Rock County		
Nathaniel Maddux	UW-Whitewater	96	15 44
	at Rock County		

STUDENT PRESENTERS BY CAMPUS

Poster Number and Poster Title

Student Name, Hometown

WATER RESEARCH FELLOWS

- 1 Assessment of Temperature Class and Potential Aquatic Use for the Bois Brule and Middle Rivers in Douglas County, WI
Morgan Fons, UW-Whitewater, Mukwonago, WI
- 2 Assisting Wisconsin Municipalities and Citizens on the Replacement of Lead Service Lines Using Wisconsin Act 137
Ryan Leckel, UW-Stout, Menomonie, WI
- 3 Evaluating Techniques for Mapping Large Woody Debris in the Upper Mississippi River
Eric Drost, UW-Eau Claire, Stanley, WI
- 4 Investigation of Physical and Chemical Water Parameters on Cyanobacterial Toxin Concentrations at Select Northern Wisconsin Lakes
Robert Hall, UW-Oshkosh, Madison, WI
- 5 Monitoring of Blue-Green Algae and Blue-Green Algal Toxins at Tainter Lake, Dunn County, WI
Kenzie Knox, UW-Whitewater, Appleton, WI
- 6 Nanoporous Silicon Membranes for the Detection of Waterborne Pathogens
Nathan Shannon, UW-Platteville, Jefferson, WI
Benjamin Thronson, UW-Eau Claire, Hollandale, WI
Co-authors: Angelica Drees, David Rohr
- 7 Sport Fish Spawning Habitat in the Lower Fox River
Boyd Delebreaux, UW-Stevens Point, Chilton, WI
Co-author: Andrew Ransom
- 8 The Absorptive and Adsorptive Capacity of Cyanobacteria (*Microcystis aeruginosa*) Exopolysaccharide Sheath for CR(VI): Environmental and Health Implications
Becky Berry, UW-Green Bay, Marinette, WI
Sarah Klemp, UW-Green Bay, Green Bay, WI
- 9 Walleye, Lake Whitefish, and Yellow Perch Predation on Round Goby in Green Bay
Alexandria Keiler-Klein, UW-Green Bay, De Pere, WI
- 10 Water Quality and Agricultural Practices in the Little Baraboo River Watershed
Paul Arellano, UW-Platteville, Muscodia, WI

Poster Number and Poster Title

Student Name, Hometown

UW-EAU CLAIRE

- 11 Analyzing the Effects of Perceived Quality of Life on Nursing Home Ratings
Nathaniel Berg, Fall Creek, WI
Co-author: Kelsea Parker
- 12 Filament Damage in Superconducting Wires: How to Build a Better Magnet
Jordan Egner-Schnitzler, Plover, WI
- 13 Grooming Tactics of Sexually Abusive Clergy: An Analysis of Files from a Wisconsin Archdiocese
Nathalie Burmeister, Chippewa Falls, WI
Co-author: Sofia Earle
- 14 Historic Changes in Water Levels in Wisconsin from 1937-2017
Emily Finger, Helenville, WI
Duabchi Vang, Onalaska, WI
- 15 Source Investigation of Nitrate Contamination in Private Wells in Eau Claire County, WI
Olivia Feider, New Berlin, WI
Victoria Vouk, Eau Claire, WI
Co-author: Dexter Zebro
- 16 Were They Kitchen Patriots? The American Woman and World War II Food Rationing
Kendra Polzin, Mosinee, WI

UW-GREEN BAY

- 17 Chloroplast DNA Sequencing Reveals the Presence of Two Exotic Phragmites Haplotypes in Northeast Wisconsin
Rebecca Malcore, Brussels, WI
- 18 Discovery of Antibiotic-Producing Soil Bacteria with Broad-Spectrum Activity
Halee Behrens, Waubeka, WI
Katlyn Tappy, Green Bay, WI
- 19 Do You Seriously Care About the Environment? Perceived Underlying Motives Can Impact Customer Relations
Noah Redfearn, De Pere, WI
- 20 Exploring Reflectacles as Anti-Surveillance Glasses and for Adversarial Machine Learning in Computer Vision
Ryan Jackson, Green Bay, WI
- 21 From Good to Great: The Qualities of Effective Coaching
Austyn Everingham, Noblesville, IN
Nicholas Livingston, Two Rivers, WI

Poster Number and Poster Title

Student Name, Hometown

- 22 The Criminalization of Sex at the Wisconsin Industrial Home for Women, 1920-1933

Jacqueline Grabowski, Sheboygan, WI

Whitlee Neuens, Niagara, WI

Megan Schoenauer, Green Bay, WI

UW-Green Bay, Manitowoc Campus

- 23 Monitoring of Water Quality Restoration Area at Centerville Creek in Manitowoc County, WI

Nicholas Geiger, Manitowoc, WI

Meghan Jackson, Two Rivers, WI

Josh Steckmesser, Two Rivers, WI

UW-LA CROSSE

- 24 Community Supported Agriculture at Old Oak Family Farm

Olivia Schauls, Frederic, WI

- 25 Determining the Mechanism of Hemolytic Function and Secretion by a Bacterial Pathogen

Gina Wade, Brown Deer, WI

- 26 Establishing the Need for a Nuclear Medicine and Molecular Imaging Pediatric Specialty

Emily Seib, La Crosse, WI

Dawn Lawry, Galesville, WI

Kellie Shaw, New Berlin, WI

Co-author: Brianna Wirkus

- 27 Gender Identity in the Language Classroom: The Central Role of Salient Identities in Multicultural Education and Mentorship

Mary Franitza, Racine, WI

- 28 Microplastics in the Upper Mississippi River: Fact or Fiction?

Courtney Baker, Reedsburg, WI

- 29 Structure Guided Functional Studies of a Lipoprotein Involved in Salmonella Copper Homeostasis

Ross Soens, Waterford, WI

Poster Number and Poster Title
Student Name, Hometown

UW-MADISON

- 30 "That's Not Offensive!": The Perpetuation of Stereotypes through Internet-based Memes
Imani Wilson, Chicago, IL
- 31 Chemical Strategies to Probe Cell-Cell Communication in Bacteria
Stephen Early, Groveland, MA
Stella Ma, Madison, WI
Wenqi Shen, Beijing, China
- 32 Comparative Analysis of Food and Health Inequities in Urban and Rural Counties in Wisconsin
Lauren Jorgensen, Stillwater, MN
Megan Knight, Barron, WI
- 33 DCC Rescues Neuronal Maturation Deficits of MBD1-Deficient Neurons
Johnson Hoang, Beaver Dam, WI
- 34 Dyspnea and Fatigue in Heart Failure: Are They Related to Brain Blood Flow?
Anna Klar, Milwaukee, WI
- 35 Investigating White Matter Pathways Associated with Ratio Processing in School-Aged Children
Monica Janz, Mosinee, WI

UW-MILWAUKEE

- 36 "So American it Hurts": Stories of the 1.5 Generation
Margarita Garcia Rojas, Milwaukee, WI
- 37 Asymmetry in the Global Economy: Making Labor, Precarity, and Infrastructure Visible
Hugo Ljungbäck, Hässleholm, Sweden
- 38 Effects of Healthcare Systems on Health: What Role Do Literacy Skills Play?
Diana Sofia Rivera, Milwaukee, WI
- 39 The Effects of Family Dynamics on Early Alcohol Sipping Behavior
Kristen Leer, Milwaukee, WI
- 40 The Graying of America: How Should We Measure Quality of Life in Older Adults with Dementia?
Rebecca Willer, Kenosha, WI
- 41 The Role of APOE Genotype, Sex, and 17 β -estradiol on Memory Consolidation in a Mouse Model of Alzheimer's Disease
Sarah Philippi, Milwaukee, WI
Co-author: Lisa Taxier

Poster Number and Poster Title
Student Name, Hometown

UW-Milwaukee at Waukesha

42 Beads and Bowls: An Archaeological Analysis of Material Culture

Veronica Church, Wales, WI

Cierra Stessl, New Berlin, WI

43 Dynamics of Intrasexual Aggression in the Lake Malawi Cichlid Fishes of the Genus *Labeotropheus*

Jacob Grudnowski, Milwaukee, WI

UW-OSHKOSH

44 Access to Care: Understanding Male Experiences with Infertility & Alternative Family Building

Kristen Mahan, Franklin, WI

45 Epigenetics and Evolution of Phenotypic Plasticity in *Arabidopsis Thaliana*

Hayley Vandenboom, Shiocton, WI

Angela Vickman, Greenleaf, WI

Co-author: Travis Smith

46 Long-term Fire History from Bass Lake, Northeastern Wisconsin

Brianna Beseler, Buffalo City, WI

47 Physical Parameters of Luminous Young Stars

Michael Watson, Mesa, AZ

48 The Origin and Composition of the Iron-Rich Neda Formation, Eastern Wisconsin: From Ancient Oceans to Economic Iron Ore

Michael Clark, Stevens Point, WI

49 The Universal PMI: The Effects of Variation and Climate on Decomposition

Melanie Gruenstern, Fond du Lac, WI

UW-Oshkosh, UW-Fox Valley campus

50 Atmospheric Testing Drone

Eric McDaniel, Appleton, WI

Co-author: David A. Juckem

51 The Mile of Music Festival, City Branding, and Sense of Place

Benjamin Sumnicht, Appleton, WI

UW-PARKSIDE

52 Confident Taxonomy: Using Bayesian Probabilities to Support Genus and Species Level Identifications Based on Morphological Traits

Nicole Chapman, Oak Creek, WI

Poster Number and Poster Title

Student Name, Hometown

53 Engaging the Consumer: The Effect of a Company's Response to Negative Product Reviews

Trevor Gott, Pleasant Prairie, WI

54 Evaluation of GGPP Synthase Product from *Mycobacterium tuberculosis* and Its Potential Bactericidal Effects

Nicholas Cina, Kenosha, WI

Co-author: Elizabeth Jackson

55 Implementing the SCAN Meta-GGA Functional for Density Functional Perturbation Theory

Zachary Bryhtan, Racine, WI

56 Short Chain Fatty Acid Kinase Enzymology

Brittany Dobrowski, Caledonia, WI

Co-author: Maxwell Bachochin

57 The Bird Comprehensive: A Guide to Medieval, Mythological, and Historic Concepts of Birds

Sydney Schoone, Racine, WI

UW-PLATTEVILLE

58 Assessing the Effects of Honeybees and Surrounding Habitat on Native Pollinators

Kelsey Gille, Rockton, IL

Alexander Harman, Dodgeville, WI

Cassandra Wolf, Dubuque, IA

59 Closing the Gap Between Theory and Evidence: Coupled Phenomena in Unsaturated Bentonite Barriers Under Variable Temperature and Chemical Conditions

Ian Breitlow, Winona, MN

Katie Wardinski, West Allis, WI

60 Emotion Mining on Twitter

Daniel Zellmer, Jefferson, WI

61 Post-Synthetic Modification of Metal Organic Framework (MOF) for Application in Toxic Metal Removal

JaLynn Schuh, Plymouth, WI

Hyeong Cheol Yoo, Seoul, South Korea

Co-author: Jamison R. Wallace

62 Removing Nanoscale Materials With First Contact™ Adhesive Polymer

Caitlyn Guldenpfennig, Letts, IA

Colton Lysaker, Galesville, WI

Maegan Mills, Ettrick, WI

Michael Schneider, Stratford, WI

Poster Number and Poster Title
Student Name, Hometown

63 The Effect of Psychosocial Stress on Substance Use Behaviors
Dominique Kornely, Manitowoc, WI

UW-Platteville Baraboo Sauk County

64 Factors Influencing Milk Production in Goats
Esther Considine, Portage, WI

UW-Platteville Richland

65 A Lifetime Dedicated to the Preservation of Prehistoric Native American Culture
Christopher Hynek, Lone Rock, WI

UW-RIVER FALLS

66 Characterizing the Phenomenon of Particle Lane Formation in an Electric Field
Jacob Hanson-Flores, Woodbury, MN
Co-author: Begad Elmelligy

67 Facial Expressions Meet Big Data
Riley Swanson, Prior Lake, MN

68 Medial Prefrontal Cortex Inhibition Attenuates Symptoms of Depression in Long Evans Rats
Sophie Ackerman, Marshfield, WI
Lucy Landaeta, Andover, MN

69 Relationship of Neonatal Beef Calf Vigor with Metabolic Status
Claiborn Bronkhorst, Brandon, WI

70 The Effect of Dairy Manure and Inorganic Nitrogen on Soil Fertility, Nutrient Uptake, and Yield in Corn
Melissa Preston, Delafield, WI
Co-author: Michael Langan

71 Using Genomics to Determine Coyote (*Canis latrans*) Lineage in Minnesota and Wisconsin
Taylor Soto, Kenosha, WI

UW-STEVENS POINT

72 Abiotic and Biotic Factors Relating to Mermithid Infection Rates in Larval Midge (Chironomidae) Specimens in Northwestern Wisconsin Streams
Macayla Greider, Lacon, IL

Poster Number and Poster Title

Student Name, Hometown

73 Defective Gene Splicing with Mutant Alleles of the Ankyrin 1 Gene Isolated from Patients with Hereditary Spherocytosis

Victor Alencar, Fortaleza, Brazil

74 Effects of Prescribed Fire on Small Mammal Community of Schmeekle Reserve

McKenna Hammons, Clear Lake, WI

Paul Schwabenbauer, La Crosse, WI

Benjamin Tjepkes, Detroit Lakes, MN

75 Grit in the Rural Economy: Unlocking the Relationship Between Employee Selection and Success

Tyler Hillery, Stevens Point, WI

76 The Development of Entry-Level Communication Skills at University: A Cross Sectional Comparison of Student and Employer Perceptions

Carly Rhyner, Medford, WI

77 What Facilitates Human Rights Performance?

Becca Andraschko, Waupaca, WI

UW-STOUT

78 Effective Responses to Sexual Violence

Aarica Humke, Greenwood, WI

MaKayla Pederson, Chatfield, MN

79 Examining Low Output Hydroelectric Generator Efficiency for Mechanical Improvement

Devon Manuele, North Prairie, WI

80 Impact of Life Skills Curriculum on Students' Well-being

Katlin Eyre, Dane, WI

81 Impacts and Factors of Women in STEM Education at UW-Stout

Michaela Guerrini, Menomonie, WI

82 The School to Prison Pipeline: Creation, Effects, and Diminishment

Madalaine McConville, Augusta, WI

83 What Drug Court Treatments and Services Matter the Most?

Rachel Smith, Menomonie, WI

UW-SUPERIOR

84 Examining the Role of Six1-Eya Transcriptional Regulators in Muscle Development

Elizabeth Kolanczyk, Superior, WI

Co-authors: Jordyn Goddard, Kim Kobar, Jordyn Nepper, Alex Zosel

Poster Number and Poster Title

Student Name, Hometown

- 85 Exploring the Relationship Between Police Socialization and Lethal vs. Non-Lethal Force Training: Implications for Police Officer Practice
Kalel Yates, Greenfield, MN
- 86 Home Away from Home: The Impact of Community Support in the Lives of Latino Immigrants in the Twin Ports Area
Ana Isabel Reyes Lam, Superior, WI
- 87 Mindfulness and Social Work Practice
Rachel Turner, Duluth, MN
- 88 The Impact of Smart Growth Initiatives in the State of Wisconsin
Iveel Munkhbaatar, Ulaanbaatar, Mongolia
- 89 Transition Needs Assessment for Students with Disabilities at Northwestern High School
Rachel Ellis, Middleton, WI

UW-WHITEWATER

- 90 A Survey of Strength and Conditioning Practices of High School Sport Coaches
Trent Rudebeck, Waterford, WI
- 91 African Americans Within Art Song: A Closer Look at Margaret Bonds and the Importance of Black Composers Within Classical Music
Darius Sanders, Jr., Milwaukee, WI
- 92 Exploring a Multifaceted Approach to Teaching ESL Students
Diana Boomsma, Madison, WI
- 93 CGI on a Shoestring Budget
Charles Harris, Whitewater, WI
- 94 Usage of RFID and NFC Technologies in Integrated Environments
Jake Krueger, West Allis, WI

UW-Whitewater at Rock County

- 95 Genetic Analysis of Antibiotic-Producing Bacteria from 4 Unique Environments in Rock County
Alissa Cassidy, Beloit, WI
- 96 L2 Transfer in Heritage Spanish Voiced Bilabial Consonants
Selena Bravo, Sharon, WI
CJ Moninger, Edgerton, WI

STUDENT PRESENTERS BY WISCONSIN LEGISLATIVE DISTRICT

Legislative District

Senate/Assembly	Student Presenter	Campus	Poster
1 1	Rebecca Malcore	UW-Green Bay	17
1 2	Alexandria Keiler-Klein	UW-Green Bay	9
1 2	Nicholas Livingston	UW-Green Bay	21
1 2	Josh Steckmesser	UW-Green Bay, Manitowoc Campus	23
1 2	Meghan Jackson	UW-Green Bay, Manitowoc Campus	23
1 2	Angela Vickman	UW-Oshkosh	45
2 4	Ryan Jackson	UW-Green Bay	20
2 4	Sarah Klemp	UW-Green Bay	8
2 5	Benjamin Sumnicht	UW-Oshkosh, UW-Fox Valley campus	51
2 6	Hayley Vandenoorn	UW-Oshkosh	45
3 7	Katie Wardinski	UW-Platteville	59
3 9	Margarita Garcia Rojas	UW- Milwaukee	36
3 9	Kristen Leer	UW-Milwaukee	39
5 13	Jake Krueger	UW-Whitewater	94
5 14	Jacob Grudnowski	UW-Milwaukee at Waukesha	43
5 15	Olivia Feider	UW-Eau Claire	15
5 15	Kellie Shaw	UW-La Crosse	26
7 19	Hugo Ljungbäck	UW-Milwaukee	37
7 19	Diana Sofia Rivera	UW-Milwaukee	38
7 19	Sarah Philippi	UW-Milwaukee	41
7 19	Darius Sanders, Jr.	UW-Whitewater	91
7 21	Nicole Chapman	UW-Parkside	52
8 24	Gina Wade	UW-La Crosse	25
9 25	Nicholas Geiger	UW-Green Bay, Manitowoc Campus	23
9 25	Dominique Kornely	UW-Platteville	63
9 25	Boyd Delebreaux	UW-Stevens Point	7
9 27	Whitlee Neuens	UW-Green Bay	22
9 27	Jacqueline Grabowski	UW-Green Bay	22
9 27	JaLynn Schuh	UW-Platteville	61
10 28	Olivia Schauls	UW-La Crosse	24
10 29	MaKayla Pederson	UW-Stout	78
10 29	Michaela Guerrini	UW-Stout	81
10 29	Rachel Smith	UW-Stout	83

**Legislative
District**

Senate/Assembly		Student Presenter	Campus	Poster
10	29	Ryan Leckel	UW-Stout	2
10	30	Jacob Hanson-Flores	UW-River Falls	66
10	30	Riley Swanson	UW-River Falls	67
10	30	Lucy Landaeta	UW-River Falls	68
11	31	Selena Bravo	UW Whitewater at Rock County	96
11	33	Morgan Fons	UW-Whitewater	1
11	33	Nathan Shannon	UW-Platteville	6
11	33	Daniel Zellmer	UW-Platteville	60
13	38	Emily Finger	UW-Eau Claire	14
13	39	Johnson Hoang	UW-Madison	33
14	40	Becca Andraschko	UW-Stevens Point	77
14	42	Claiborn Bronkhorst	UW-River Falls	69
14	42	Katlin Eyre	UW-Stout	80
15	43	Charles Harris	UW-Whitewater	93
15	43	CJ Moninger	UW-Whitewater	96
15	43	Alissa Cassady	UW-Whitewater at Rock County	95
16	48	Diana Boomsma	UW-Whitewater	92
17	49	Paul Arellano	UW-Platteville	10
17	49	Cassandra Wolf	UW-Platteville	58
17	49	Kelsey Gille	UW-Platteville	58
17	49	Ian Breitlow	UW-Platteville	59
17	49	Hyeong Cheol Yoo	UW-Platteville	61
17	49	Caitlyn Guldenpfennig	UW-Platteville	62
17	50	Courtney Baker	UW-La Crosse	28
17	51	Alexander Harman	UW-Platteville	58
17	51	Christopher Hynek	UW-Platteville Richland	65
18	52	Melanie Gruenstern	UW-Oshkosh	49
18	54	Michael Watson	UW-Oshkosh	47
19	56	Eric McDaniel	UW-Oshkosh, UW-Fox Valley campus	50
19	57	Kenzie Knox	UW-Whitewater	5
20	60	Halee Behrens	UW-Green Bay	18
21	61	Trevor Gott	UW-Parkside	53
21	61	Nicholas Cina	UW-Parkside	54
21	62	Mary Franitza	UW-La Crosse	27
21	62	Brittany Dobrowsi	UW-Parkside	56
21	63	Zachary Bryhtan	UW-Parkside	55
22	64	Rebecca Willer	UW-Milwaukee	40

Legislative**District**

Senate/Assembly		Student Presenter	Campus	Poster
22	64	Taylor Soto	UW-River Falls	71
22	66	Sydney Schoone	UW-Parkside	57
23	67	Nathalie Burmeister	UW-Eau Claire	13
23	68	Nathaniel Berg	UW-Eau Claire	11
23	68	Eric Drost	UW-Eau Claire	3
23	68	Aarica Humke	UW-Stout	78
23	68	Madalaine McConville	UW-Stout	82
23	69	Michael Schneider	UW-Platteville	62
23	69	Sophie Ackerman	UW-River Falls	68
24	71	Jordan Egner-Schnitzler	UW-Eau Claire	12
24	71	Michael Clark	UW-Oshkosh	48
24	71	Macayla Greider	UW-Stevens Point	72
24	71	Victor Alencar	UW-Stevens Point	73
24	71	Paul Schwabenbauer	UW-Stevens Point	74
24	71	Benjamin Tjepkes	UW-Stevens Point	74
24	71	Tyler Hillery	UW-Stevens Point	75
25	73	Elizabeth Kolanczyk	UW-Superior	84
25	73	Kalel Yates	UW-Superior	85
25	73	Ana Isabel Reyes Lam	UW-Superior	86
25	73	Rachel Turner	UW-Superior	87
25	73	Iveel Munkhbaatar	UW-Superior	88
25	75	Megan Knight	UW-Madison	32
25	75	McKenna Hammons	UW-Stevens Point	74
26	76	Robert Hall	UW-Oshkosh	4
26	77	Imani Wilson	UW-Madison	30
26	77	Stephen Early	UW-Madison	31
26	77	Wenqi Shen	UW-Madison	31
26	77	Lauren Jorgensen	UW-Madison	32
26	78	Stella Ma	UW-Madison	31
27	79	Rachel Ellis	UW-Superior	89
27	80	Benjamin Thronson	UW-Eau Claire	6
27	81	Esther Considine	UW-Platteville	64
			Baraboo Sauk County	
28	82	Kristen Mahan	UW-Oshkosh	44
28	83	Ross Soens	UW-La Crosse	29
28	83	Trent Rudebeck	UW-Whitewater	90
28	84	Anna Klar	UW-Madison	34
28	84	Cierra Stessl	UW-Milwaukee at Waukesha	42
29	86	Kendra Polzin	UW-Eau Claire	16
29	86	Monica Janz	UW-Madison	35
29	87	Carly Rhyner	UW-Stevens Point	76

Legislative**District**

Senate/Assembly	Student Presenter	Campus	Poster
30 88	Noah Redfearn	UW-Green Bay	19
30 88	Austyn Everingham	UW-Green Bay	21
30 88	Megan Schoenauer	UW-Green Bay	22
30 89	Becky Berry	UW-Green Bay	8
30 89	Katlyn Tappy	UW-Green Bay	18
31 91	Victoria Vouk	UW-Eau Claire	15
31 92	Dawn Lawry	UW-La Crosse	26
31 92	Brianna Beseler	UW-Oshkosh	46
31 92	Colton Lysaker	UW-Platteville	62
31 92	Maegan Mills	UW-Platteville	62
32 94	Duabchi Vang	UW-Eau Claire	14
32 95	Emily Seib	UW-La Crosse	26
33 99	Veronica Church	UW-Milwaukee at Waukesha	42
33 99	Melissa Preston	UW-River Falls	70
33 99	Devon Manuele	UW-Stout	79

16TH ANNUAL

Research in the Rotunda

Made possible with support from:

State of Wisconsin Department of Administration
UW-Madison Memorial Union

Produced by the University of Wisconsin System

