

KEYNOTE SPEAKER



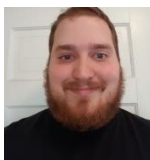
Philip Gingerich, Ph.D.

**Professor Emeritus of Earth Sciences, Evolutionary Biology, and Anthropology
Curator Emeritus, Museum of Paleontology
University of Michigan**

“Chance and Opportunity in the Origin of Whales”

Whales are mammals like us that give birth to live infants, nurse their young, and breathe air. But they are also fully aquatic and live like fish. In *Moby Dick* Herman Melville argued that whales *are* fish. When was it scientifically accepted that whales are mammals? And if they are mammals, what kind of mammals? My interest in whales and their geological history began with the lucky discovery of a fossil in the field, which turned into an opportunistic and broadly international research program. Chance and opportunity too guided the transition from land mammals to the earliest semi-aquatic 'archaeocetes' and then to fully-aquatic cetaceans as we know them today. Chance was enhanced by experimentation. In the world of science, it is often said that chance favors the prepared mind, and then opportunity follows. Chance brought opportunity to my career and I expect it will to yours!

UNDERGRADUATE STUDENT RESEARCH TALKS



John McAfee, Aquinas College

Major: Chemistry / Senior, Class of 2017

Research Mentor: Jonathan Fritz, Ph.D. – Department of Chemistry

“Relationship between Biaryl Ligand Structure and Reactivity in Under-Air Direct Arylation”



Lauren Strohbehn, Calvin College

Major: Biology / Minor: Biotechnology and Kinesiology /

Senior, Class of 2017

Research Mentors: Larry Louters, Ph.D. and Brendan Looyenga, Ph.D. – Department of Chemistry & Biochemistry

“Exploring the Membrane Lipid Environment for Glucose Transporter 1”



Jennifer Jess, Grand Valley State University

Major: Biomedical Sciences / Minor: Chemistry

Senior, Class of 2017

Research Mentor: Patrick Grohar, MD – Van Andel Research Institute

“Targeting the DNA damage response in Ewing sarcoma cells”



Sarah Petersen, Hope College

Major: Mathematics

Senior, Class of 2017

Research Mentor: Stephanie Edwards, Ph.D. – Department of Mathematics

“Level Curves of a Real Algebraic Function: A Generalization of a Theorem of Pólya”

GRADUATE STUDENT RESEARCH TALKS



**Emily Machiela, Ph.D. Candidate – Cell and Molecular Genetics
Van Andel Institute Graduate School**

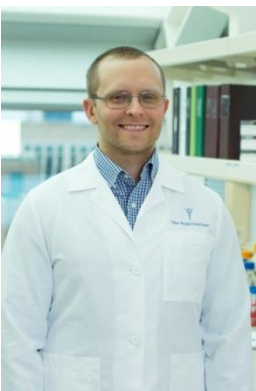
Research Mentor: Jeremy Van Raamsdonk, Ph.D.

Alumna: Grand Valley State University - Bachelor of Science, Clinical Exercise Science with an emphasis in Biomedical Sciences

“Investigating the role of oxidative stress in *C. elegans* models of Huntington’s disease”

Emily’s VAIGS student profile: <http://vaigs.vai.org/current-students-alumni/students/emily-machiela/>

Van Raamsdonk Lab Website: <http://vanraamsdonklab.vai.org/>



**Kevin Maupin, Ph.D. Candidate – Cell and Molecular Genetics
Van Andel Institute Graduate School**

Research Mentor: Bart Williams, Ph.D.

Alumnus: Grand Valley State University - Bachelor of Science, Cell and Molecular Biology

“Galectin-3 deficiency enhances osteoblast mineralization and stimulates cortical bone expansion during aging and gonadectomy”

Kevin’s VAIGS student profile: <http://vaigs.vai.org/current-students-alumni/students/kevin-maupin/>

Williams Lab Website: <http://williamslab.vai.org/>

10TH ANNUAL
WEST MICHIGAN REGIONAL UNDERGRADUATE SCIENCE RESEARCH CONFERENCE
2016 POSTER PRESENTATIONS

AUTHORS LIST

Pages 4-7 includes a list of principal presenting authors by last name (alphabetical order)

LAST NAME	First Name	Poster #	Institution	Field of Study/Field of Expertise	Co-Presenters
Aardema	Megan	91	Calvin College	Chemistry	
Abdelaziz	Sami	61	Michigan State University	Biomedical Sciences	
Ahmadzai	Mohammad	62	Michigan State University	Biomedical Sciences	
Alzouhayli	Suma	60	Kalamazoo College	Biomedical Sciences	
Andrews	Stephanie	88	Lansing Community College	Cell and Molecular Biology	John LaFreniere, Alisha Williamson
Arbogast	Audrey	74	Grand Valley State University	Cell and Molecular Biology	
Armistead	Brooke	75	Grand Valley State University	Cell and Molecular Biology	
Baas	Leah	28	Calvin College	Biology	
Bailey	John	107	Kalamazoo College	Chemistry	
Baker	Jennifer	133	Indiana Wesleyan University	Microbiology	
Barnes	Camille	1	Calvin College	Biochemistry	
Boelens	Matthew	118	Calvin College	Engineering	
Bomya	Rachel	139	Grand Valley State University	Neuroscience	
Bosch	Timothy	119	Calvin College	Engineering	
Brafford	Morgann	157	Michigan State University	Psychology	
Bruinius	Jacob	92	Calvin College	Chemistry	
Burgess	Meghan	146	Ferris State University	Pharmacology	
Cho	Christi	108	Kalamazoo College	Chemistry	
Colwell	Quinton	13	Kalamazoo College	Biochemistry	
Cossin	Leah	69	Ferris State University	Biotechnology	
Crombez	Emily	137	Central Michigan University	Neuroscience	
Deans	Erin	17	Michigan State University	Biochemistry	
DeBoer	Heather	155	Hope College	Psychology	Shelby Buikema, Allison Johnson, Carolina Marshall
Degenhardt	Bridgette	26	Aquinas College	Biology	Joshua Watkins
Dempsey	Tyler	141	Hope College	Neuroscience	
Eudave	Deseree	140	Grand Valley State University	Neuroscience	
Fadler	Rachel	109	Kalamazoo College	Chemistry	
Filipowicz	Natalie	43	Hope College	Biology	
Fini	Matthew	138	Central Michigan University	Neuroscience	
Fogo	Garrett	142	Hope College	Neuroscience	
Folkerts	Andrew	148	Calvin College	Physics	
Freiman	Andrew	76	Grand Valley State University	Cell and Molecular Biology	
Frndak	Abigail	93	Calvin College	Chemistry	

LAST NAME	First Name	Poster #	Institution	Field of Study/Field of Expertise	Co-Presenters
Gager	Christopher	9	Hope College	Biochemistry	Mark Cunningham
Glass	Sarah	14	Kalamazoo College	Biochemistry	
Glass	Eric	126	Michigan State University	Epidemiology & Biostatistics	
Gohl	Trevor	63	Michigan State University	Biomedical Sciences	
Gohl	Trevor	64	Michigan State University	Biomedical Sciences	Ryan M. Mack
Gombas	Jason	150	Hope College	Physics	
Gonzalez	Trechaun	156	Hope College	Psychology	
Goodman	Ethan	44	Hope College	Biology	Jada Royer, Ryann Felton, Kathleen Muloma, Lucas Wiles
Goodwin	Alyssa	143	Hope College	Neuroscience	
Gormong	Ethan Gormong	104	Indiana Wesleyan University	Chemistry	
Greene	Kenton	149	Calvin College	Physics	
Greidanus	Thomas	55	Calvin College	Biomedical Sciences	
Guida	Trevor	77	Grand Valley State University	Cell and Molecular Biology	
Hahs	Emma	78	Grand Valley State University	Cell and Molecular Biology	
Hall	Johnathan	79	Grand Valley State University	Cell and Molecular Biology	Zachary Klamer
Hanselman	Justin	122	Hope College	Engineering	
Heer	Chad	52	Indiana Wesleyan University	Biology	
Hindy	Michael	125	Cornerstone University	Environmental Biology	Travis Mangione
Hohlman	Robert	94	Calvin College	Chemistry	
House	Rachel	29	Calvin College	Biology	
Hubbell	Grace	113	Lake Superior State University	Chemistry	
Hudson	Michael	56	Grand Valley State University	Biomedical Sciences	Zach Harper
Hughes	Sarah	30	Calvin College	Biology	Rachel Warners
Ingalls	Emily	90	Grand Valley State University	Chemistry	
Ismail	Amanda	115	Cornerstone University	Ecology and Evolution	Katie J. Smallman
Ismond	Jonathan	31	Calvin College	Biology	
Jabara	James	154	Michigan State University	Physiology - Pre-Med	Auguste Niyibizi
James	Pearl	65	Michigan State University	Biomedical Sciences	
Jansen	Nathan	32	Calvin College	Biology	
Jansen	Jacob	102	Hope College	Chemistry	
Jess	Jennifer	58	Grand Valley State University	Biomedical Sciences	
Joffre	Scott	151	Hope College	Physics	
Jonker	Patrick	33	Calvin College	Biology	
Kalb	Annah	105	Indiana Wesleyan University	Chemistry	
Kamp	Derrick	34	Calvin College	Biology	
Kazmierczak	Nathanael	95	Calvin College	Chemistry	
Kennington	Lauren	10	Hope College	Biochemistry	
Keramidas	Christina	110	Kalamazoo College	Chemistry	
Kim	Sarah Faith	45	Hope College	Biology	
Kim	Na Young	116	Kalamazoo College	Ecology and Evolution	
Kobylarz	Amy	89	Western Michigan University	Cell and Molecular Biology	
Koelsch	Jenna	57	Grand Valley State University	Biomedical Sciences	
Kok	Maryam	24	Western Michigan University	Biochemistry	
Kuipers	Alexandra	35	Calvin College	Biology	
Ladson	Brittany	18	Michigan State University	Biochemistry	
Lee	Sieun Ruth	87	Hope College	Cell and Molecular Biology	
LeVasseur	Grant	19	Michigan State University	Biochemistry	
Longenecker	Jacob	68	Ferris State University	Biotechnology	
Lunderberg	Anna	152	Hope College	Physics	
Machay	Alyssa	46	Hope College	Biology	
Mack	Ryan	66	Michigan State University	Biomedical Sciences	
Madrigal					
Martinez	Natalia	23	University of Michigan	Biochemistry	
Maguire	Maria	128	Aquinas College	Mathematics	
Maitra	Shurjo	120	Calvin College	Engineering	

LAST NAME	First Name	Poster #	Institution	Field of Study/Field of Expertise	Co-Presenters
Mancine	Ryley	158	Michigan State University	Psychology	
Masiak	Aleksandra	103	Hope College	Chemistry	
McAfee	John	101	Aquinas College	Chemistry	
McCormick	Kelly	36	Calvin College	Biology	
McGuire	Sean	20	Michigan State University	Biochemistry	
Michalski	Michael	80	Grand Valley State University	Cell and Molecular Biology	
Michmerhuizen	Anna	2	Calvin College	Biochemistry	
Miller	Garret	16	Kalamazoo College	Biochemistry	Cydney M. Martell and Sharat S. Kamath
Moretto	Michael	21	Michigan State University	Biochemistry	
Narisetty	Susmitha	15	Kalamazoo College	Biochemistry	
Nelson	Alec	153	Hope College	Physics	
Newman	Tiffany	70	Ferris State University	Biotechnology	
Nykamp	Heidi	159	Calvin College	Science Education	Jooyoung Kong
Occhiuto	Christopher	67	Michigan State University	Biomedical Sciences	
Ogunnoiki	Temitope	121	Calvin College	Engineering	Chinelo Ezenwelu
Oostindie	Megan	47	Hope College	Biology	John Peterson
Orellana	Aaron	81	Grand Valley State University	Cell and Molecular Biology	
Otseidu	Kwamina	117	Michigan State University	Ecology and Evolution	
Pardy	Luke	82	Grand Valley State University	Cell and Molecular Biology	
Pavlack	Monica	71	Ferris State University	Biotechnology	
Peel	Darren	54	Kalamazoo College	Biology	
Petkova	Bilyana	134	Hillsdale College	Microbiology	
Phillips	Chelsea	53	Indiana Wesleyan University	Biology	
Pniewski	Katie	48	Hope College	Biology	Amber Bosch and Monica Elliott
Porter	Lindsey	49	Hope College	Biology	
Potter	Hannah	50	Hope College	Biology	
Prafke	Rylan	123	Hope College	Engineering	
PreFontaine	Noah	145	Calvin College	Pharmacology	
Richards	Jonathon	131	Grand Valley State University	Microbiology	
Roloff	Emily	3	Calvin College	Biochemistry	
Romero	Evan	96	Calvin College	Chemistry	
Rylaarsdam	Andrew	4	Calvin College	Biochemistry	
Rylski	Adrian	8	Central Michigan University	Biochemistry	
Schmidt	Mackenzie	11	Hope College	Biochemistry	
Schmidtman	Madison	83	Grand Valley State University	Cell and Molecular Biology	
Secrest	Rena	106	Indiana Wesleyan University	Chemistry	
Shatawi	Zaineb	84	Grand Valley State University	Cell and Molecular Biology	
Sheffield	Eric	59	Grand Valley State University	Biomedical Sciences	
Silvers	Samantha	25	Adrian College	Biology	
Simko	Stephanie A.	144	Hope College	Neuroscience	
Smolen	Kali	85	Grand Valley State University	Cell and Molecular Biology	
Spencer	Tristen	129	Aquinas College	Mathematics	
Spratt	Madison	86	Grand Valley State University	Cell and Molecular Biology	
Steen	Collin	111	Kalamazoo College	Chemistry	
Stevens	Conner	147	Adrian College	Physics	
Strikwerda	Sarah	130	Calvin College	Mathematics	Joyce (JuHye) Park
Strohbehn	Lauren	37	Calvin College	Biology	
Sweet	Jared	42	Grand Valley State University	Biology	Dallas Rohraff
Tabook	Ather	135	University of Michigan	Microbiology	
Thompson	Leah	136	Ferris State University	Molecular Diagnostics	
Tilma	Luke	38	Calvin College	Biology	Harry Ervin
Toering	Ryan	39	Calvin College	Biology	Abigail Stearns
Towne	Jacob	127	Aquinas College	Geography	
Truss	Myles	112	Kalamazoo College	Chemistry	
Tubergen	Philip	5	Calvin College	Biochemistry	Mason Swartz
VanDusen	Abby	72	Ferris State University	Biotechnology	
VanLaar	Lucas	97	Calvin College	Chemistry	
Versluis	Philip	12	Hope College	Biochemistry	

LAST NAME	First Name	Poster #	Institution	Field of Study/Field of Expertise	Co-Presenters
Voogt	Rebecca	40	Calvin College	Biology	
Wadhwa	Raoul	114	Kalamazoo College	Computational Biology / Bioinformatics	
Wagner	Avery	27	Aquinas College	Biology	
Walsh	Sarah	22	Michigan State University	Biochemistry	
Walters	Elianna	41	Calvin College	Biology	
Wassink	Lea	98	Calvin College	Chemistry	
Wernette	Courtney	73	Ferris State University	Biotechnology	
Wingrove	Catherine	51	Hope College	Biology	Derrick Obiri-Yeboah
Wodarek	Jeremy	7	Calvin College	Biochemistry	
Xu	Shaowen	132	Grand Valley State University	Microbiology	
Yoo	Joy	99	Calvin College	Chemistry	
Zeeff	Corrine	124	Michigan State University	Engineering	
Zerull	Emily	100	Calvin College	Chemistry	
Zhang	Sherrice	6	Calvin College	Biochemistry	

2016 POSTER PRESENTATION TITLES

Pages 8-24 include a list of principal presenting authors and the titles of their presentations. This list is in alpha order by major and then institution.

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|---|---------------------|
| 1. Camille Barnes, Calvin College
(Co-Authors: Dr. Brendan Looyenga)
<i>"The Roles of E-Cadherin and MET in Papillary Renal Cell Carcinoma"</i> | Biochemistry |
| 2. Anna Michmerhuizen, Calvin College
(Co-Authors: Nancy L. Wengenack; H. Robert Bergen, III)
<i>"Characterization of the Histoplasma Capsulatum Glycans"</i> | Biochemistry |
| 3. Emily Roloff, Calvin College
<i>"Effects of Kifunensine on Renal Cells"</i> | Biochemistry |
| 4. Andrew Rylaarsdam, Calvin College
<i>"Binding and Folding Affects of Alternate Amino Acid Residues in β-hairpin peptides"</i> | Biochemistry |
| 5. Philip Tubergen, Calvin College
(Co-Presenting Authors: Mason Swartz)
(Co-Authors: Chad Tatko)
<i>"Metal Ion Chelation and Oxidation Kinetics involving Synthetic Peptides"</i> | Biochemistry |
| 6. Sherrice Zhang, Calvin College
(Co-Authors: Dr. Michael Barbachyn)
<i>"Efforts Aimed at Potentiating the Gram-negative Activity of Fluoroquinolone Antibacterial Agents: 1,8-Naphthyridones"</i> | Biochemistry |
| 7. Jeremy Wodarek, Calvin College
(Co-Authors: Rachael Baker PhD)
<i>"Developing a New Biosensor for Ras Activation"</i> | Biochemistry |
| 8. Adrian Rylski, Central Michigan University
(Co-Authors: Herbert W. Kavunja, Hannah N. Foley, Temitope Nathan, and Benjamin M. Swarts*)
<i>"Synthesis and Evaluation of Dinitrophenyl-Modified Trehalose Analogues for the Delivery of Antibody-Recruiting Small Molecules (ARMs) to Mycobacteria"</i> | Biochemistry |
| 9. Christopher Gager, Hope College
(Co-Presenting Authors: Mark Cunningham)
(Co-Authors: Dr. Maria Burnatowska-Hledin mentor)
<i>"Effects of VACM-1/Cul5 Gene Knockout on Cellular Proliferation Using CRISPR-Cas9 Approach"</i> | Biochemistry |
-

10. Lauren Kennington, Hope College (Co-Authors: Amanda Eckermann, Lyndsy Miller) <i>"Effects of [(cymeneRu(μ2- β -D-thioglucose)Cl)₂] on Cell Motility and Viability"</i>	Biochemistry
11. Mackenzie Schmidt, Hope College <i>"System Xc- Regulation: Effects of Mutations on Membrane Expression and Ubiquitination Status"</i>	Biochemistry
12. Philip Versluis, Hope College (Co-Authors: Daniel A. Smith, Andy Hamilton, Damien Hill, LaVana Greene, and Leah Chase) <i>"Activation of System xc- Trafficking via an Akt-dependent Signal Transduction Pathway"</i>	Biochemistry
13. Quinton Colwell, Kalamazoo College (Co-Authors: Laura Lowe Furge) <i>"DAS Analysis of the Molecular Dynamics of CYP2D6*1"</i>	Biochemistry
14. Sarah Glass, Kalamazoo College (Co-Authors: Laura Lowe Furge) <i>"Characterization of Interactions between Rolapitant and Two Major Drug Metabolizing Enzymes: CYP2D6 and CYP3A4"</i>	Biochemistry
15. Susmitha Narisetty, Kalamazoo College (Co-Authors: Hemachand Tummala) <i>"Inulin Acetate Nanoparticles as Vaccine Adjuvants"</i>	Biochemistry
16. Garret Miller, Kalamazoo College (Co-Presenting Authors: Cydney M. Martell and Sharat S. Kamath) (Co-Authors: Laura Lowe Furge) <i>"Expression, Purification, and Crystallization of CYP2D6 *1 and *53"</i>	Biochemistry
17. Erin Deans, Michigan State University (Co-Authors: Ruiqiong Guo, Heedeok Hong) <i>"The Role of Structural Cavities on the Stability and Function of the Intramembrane Protease GlpG"</i>	Biochemistry
18. Brittany Ladson, Michigan State University (Co-Authors: Michaela TerAvest) <i>"In vivo analysis of aerobic terminal reductases in Shewanella oneidensis"</i>	Biochemistry
19. Grant LeVasseur, Michigan State University (Co-Authors: Mr. Dawei Chen, Dr. Denis Proshlyakov) <i>"Spectro-Electrochemistry of Highly Oxidized Species in Metalloenzymes"</i>	Biochemistry
20. Sean McGuire, Michigan State University <i>"Utilization of a Site-directed Mutagenesis Approach to Understand the Self-Assemblage of a Bacterial Microcompartment Shell Protein"</i>	Biochemistry

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- 21. Michael Moretto, Michigan State University** **Biochemistry**
(Co-Authors: Niklas Gerkau, Dr. Christine R. Rose)
"Intracellular sodium (and NADH) changes during energy deficiency in mouse brain slices in an age-dependent manner"
-
- 22. Sarah Walsh, Michigan State University** **Biochemistry**
(Co-Authors: Sandra Lebek, M.Sc.; Alexandra Chadt, Dr. rer. nat.; Hadi Al-Hasani, Prof. Dr. rer. nat.)
"Expression analysis of candidate risk genes for type 2 diabetes in liver tissue of a mouse backcross population"
-
- 23. Natalia Madrigal Martinez, University of Michigan** **Biochemistry**
(Co-Authors: Sang-Jin Kim, Starla Zemelis-Durfee, Federica Brandizzi)
"Understanding the localization of Pectin Synthesis and Modification in Golgi Bodies"
-
- 24. Maryam Kok, Western Michigan University** **Biochemistry**
(Co-Authors: Sherine O. Obare, Ph.D.)
"Synthesis of Biodegradable Antibiotic-Functionalized Calcium-based Nanoparticles for Drug Delivery"
-
- 25. Samantha Silvers, Adrian College** **Biology**
(Co-Authors: Jeffrey Lake)
"Habitat Occupancy of Native and Non-native Flora of Walden West Biological Station"
-
- 26. Bridgette Degenhardt, Aquinas College** **Biology**
(Co-Presenting Authors: Joshua Watkins)
"NOD1 as an Experimental Gene of Interest in the Innate Immune System"
-
- 27. Avery Wagner, Aquinas College** **Biology**
(Co-Authors: Jennifer Hess)
"The Antimicrobial Effect of Garlic and Garlic Supplements and the Characterization of Contaminants in the Supplements"
-
- 28. Leah Baas, Calvin College** **Biology**
(Co-Authors: Richard Nyhof, David Koetje)
"Developing Investigative Labs for Biology 230"
-
- 29. Rachel House, Calvin College** **Biology**
"Chemical and mechanical isolation of mouse RPE"
-
- 30. Sarah Hughes, Calvin College** **Biology**
(Co-Presenting Authors: Rachel Warners)
(Co-Authors: Keith Grasman)
"Great Lakes Restoration Initiative: Reassessment of Wildlife Reproduction and Health Impairments in the Saginaw Bay and River Raisin Areas of Concern and Grand Traverse Bay"
-

31. Jonathan Ismond, Calvin College	Biology
<i>"Damaging Effects of Oxidative Stress and Hyperlipidemia on Retinal Structure in Animal Models of Diabetic Retinopathy"</i>	
32. Nathan Jansen, Calvin College	Biology
(Co-Authors: Professor Dave Warners)	
<i>"Phenology and Floral Inventory at Flat Iron Lake Preserve"</i>	
33. Patrick Jonker, Calvin College	Biology
(Co-Authors: Dr. David Warners)	
<i>"Curb-Cut Rain Garden Research"</i>	
34. Derrick Kamp, Calvin College	Biology
<i>"IL6 secreted by EC increases HIV infection in resting CD4+ T cells without activation"</i>	
35. Alexandra Kuipers, Calvin College	Biology
(Co-Authors: Ryan M. Bebej, PhD)	
<i>"Hind Limb Form and Function in Terrestrial and Semi-Aquatic Mammals: Insights into Locomotor Evolution in Early Cetaceans"</i>	
36. Kelly McCormick, Calvin College	Biology
(Co-Authors: Dr. Daniel Michele, PhD. and Molly Thorson)	
<i>"Developing Bulk Wounding Methods to Study Plasma Membrane Repair in Skeletal Muscle Fibers"</i>	
37. Lauren Strohbehn, Calvin College	Biology
(Co-Authors: Dr. Larry Louters, Dr. Brendan Looyenga)	
<i>"Exploring the Membrane Environment for Glucose Transporter 1"</i>	
38. Luke Tilma, Calvin College	Biology
(Co-Presenting Authors: Harry Ervin)	
(Co-Authors: Dr. Randall DeJong)	
<i>"Geographic and Taxonomic Sources of Fecal Microbes in the Plaster Creek Watershed"</i>	
39. Ryan Toering, Calvin College	Biology
(Co-Presenting Authors: Abigail Stearns)	
(Co-Authors: Amy Wilstermann, PhD)	
<i>"CancerEd: Investigating the Need for Cancer Curricula"</i>	
40. Rebecca Voogt, Calvin College	Biology
(Co-Authors: J. Brian Byrd, MD, MS; Megan Munger, BA; Brian Bazzell, MS; Kevin Sekerak)	
<i>"Unlocking the secrets of urine: assaying urinary extracellular mRNA in healthy volunteers"</i>	
41. Elianna Walters, Calvin College	Biology
(Co-Authors: Dianne M. Walters, PhD.)	
<i>"Effect of calcineurin inhibition on V2O5-induced pulmonary inflammation and fibrosis in C57BL/6J mice"</i>	

<p>42. Jared Sweet, Grand Valley State University (Co-Presenting Authors: Dallas Rohraff) (Co-Authors: Dr. Roderick Morgan) <i>"Cinnamon Bark and Oregano Essential Oils Show Promise as Antibacterial Agents"</i></p>	Biology
<p>43. Natalie Filipowicz, Hope College (Co-Authors: Dr. Benjamin Kopek, Haley Fischman) <i>"Specific Lipid Requirements and Localized Lipid Composition Changes Associated with a Positive-Strand RNA Virus RNA Replication Complex"</i></p>	Biology
<p>44. Ethan Goodman, Hope College (Co-Presenting Authors: Jada Royer, Ryann Felton, Kathleen Muloma, Lucas Wiles) (Co-Authors: Dr. Leah Chase) <i>"Lithium Treatment on HCA Induced Bipolar Behavior: An Animal Model"</i></p>	Biology
<p>45. Sarah Faith Kim, Hope College (Co-Authors: Dr. Thomas Bultman, Lydia Pagel) <i>"Level of fly vector mutualism depends on Epichloë reproductive strategy"</i></p>	Biology
<p>46. Alyssa Machay, Hope College (Co-Authors: Dr. Benjamin Kopek) <i>"Generation of a Reverse Genetics System of Zika Virus in Drosophila melanogaster"</i></p>	Biology
<p>47. Megan Oostindie, Hope College (Co-Presenting Authors: John Peterson) <i>"Investigating Unknown Regions of E. coli Metabolism"</i></p>	Biology
<p>48. Katie Pniewski, Hope College (Co-Presenting Authors: Amber Bosch and Monica Elliott) (Co-Authors: Danny Kosiba, Dr. Kathy Winnett-Murray, and Dr. K. Greg Murray) <i>"Wildlife Use Patterns in a Constructed Wetland"</i></p>	Biology
<p>49. Lindsey Porter, Hope College (Co-Authors: Dr. Greg Fraley) <i>"Gonadal regression elicited in Pekin duck drakes and hens associated with a drop in light intensity"</i></p>	Biology
<p>50. Hannah Potter, Hope College (Co-Authors: Greg Fraley, Lindsey Porter) <i>"A lack of effect of ketamine on the musculoskeletal growth of ducks in grow out"</i></p>	Biology

51. Catherine Wingrove, Hope College (Co-Presenting Authors: Derrick Obiri-Yeboah) (Co-Authors: Dr. Peter J. Vollbrecht) <i>"Effect of a Junk Food Diet of the Prefrontal Cortex: Working memory, BDNF and GLT-1"</i>	Biology
52. Chad Heer, Indiana Wesleyan University (Co-Authors: Chad Heer, Marin Young, David Swygart, Ryan Kaufman, Boriana K. Tchernookova, Marcin Wlizla, Marko Horb Matthew A. Kreitzer, Robert Paul Malchow) <i>"Measurement of extracellular changes in acidity mediated by radial glial cells (Müller cells) of the vertebrate retina."</i>	Biology
53. Chelsea Phillips, Indiana Wesleyan University (Co-Authors: Mark Asnicar; M.S., Ph.D.) <i>"CART, VPAC2R, and the Control of Insulin Release"</i>	Biology
54. Darren Peel, Kalamazoo College <i>"The Effects of Mineralocorticoid Receptor Antagonism on TRPV4 Mediated Vasodilation in the Aorta of Hypertensive Rats"</i>	Biology
55. Thomas Greidanus, Calvin College <i>"Saving Avulsed Teeth: Storage Solution Analysis"</i>	Biomedical Sciences
56. Michael Hudson, Grand Valley State University (Co-Presenting Authors: Zach Harper) (Co-Authors: John Capodilupo) <i>"110 Years and Counting: Multiple Approaches for the Study of Alzheimer's Disease"</i>	Biomedical Sciences
57. Jenna Koelsch, Grand Valley State University (Co-Authors: Daniel Doyle-Cell and Molecular Biology & Biomedical Science, Dr. Merritt Taylor-Biomedical Science & Cell and Molecular Biology) <i>"The Effects of the Common Prenatal Supplement Docosahexaenoic Acid (DHA) on Neurogenesis in the Developing Embryo"</i>	Biomedical Sciences
58. Jennifer Jess, Grand Valley State University (Co-Authors: Dr. Laurie Witucki) <i>"Determination of Effective FAK Substrate and Inhibitor Peptides Based on p130cas"</i>	Biomedical Sciences
59. Eric Sheffield, Grand Valley State University <i>"Variation in density of human cranial dura mater using computerized tomography"</i>	Biomedical Sciences
60. Suma Alzouhayli, Kalamazoo College (Co-Authors: Jill Bettinger, Laura Mathies, Gina Blackwell, Andrew Davies, Dwight Williams) <i>"Investigating the effect of ser-1 in a C. elegans model of glutamate excitotoxicity"</i>	Biomedical Sciences

-
- 61. Sami Abdelaziz, Michigan State University** **Biomedical Sciences**
(Co-Authors: Trevor G. Gohl, Pearl James, Ryan M. Mack, Hariharan Subramanian, Rupali Das)
"Novel therapeutic intervention to modulate allergen-induced iNKT cell-mediated immune response in asthma"
-
- 62. Mohammad Ahmadzai, Michigan State University** **Biomedical Sciences**
(Co-Authors: Canchai Yang, Christopher Occhiuto, Dennis Shubitowski, Hariharan Subramanian)
"GRK2-6 expression in mast cells is not affected by activation of FcεRI"
-
- 63. Trevor Gohl, Michigan State University** **Biomedical Sciences**
(Co-Authors: Trevor G. Gohl, Peng Guan, Ryan M. Mack, Elizabeth Evans, Maurice Zauderer, Rupali Das, Kim E. Nichols)
"Enhancing the Anti-Leukemia Functions of Invariant Natural Killer T Cells Using a Tumor Antigen-Specific Model"
-
- 64. Trevor Gohl, Michigan State University** **Biomedical Sciences**
(Co-Presenting Authors: Ryan M. Mack)
(Co-Authors: Nicholas D. Ether, Sami J. Abdelaziz, Ryan M. Mack, Pearl James, Lauren Budas, Rupali Das)
"The adaptor protein ADAP regulates invariant natural killer T cell functions."
-
- 65. Pearl James, Michigan State University** **Biomedical Sciences**
"Novel role of CD2 in iNKT-cell mediated allergic response during asthma."
-
- 66. Ryan Mack, Michigan State University** **Biomedical Sciences**
(Co-Authors: Trevor G. Gohl, Peng Guan, Rupali Das)
"Opposing roles of CD2 and 2B4 in invariant natural killer T cell anti-tumor function"
-
- 67. Christopher Occhiuto, Michigan State University** **Biomedical Sciences**
(Co-Authors: Canchai Yang, Dennis Shubitowski and Hariharan Subramanian)
"Mast cell responses are dictated by genetic susceptibility of an individual to a Th1 or Th2 immunity type"
-
- 68. Jacob Longenecker, Ferris State University** **Biotechnology**
(Co-Authors: Michelle Xu, David X Liu)
"The activating transcription factor 5 (ATF5) stimulates autophagy in HeLa cells."
-
- 69. Leah Cossin, Ferris State University** **Biotechnology**
(Co-Authors: Research Fellow: Ms. Leah Cossin- Major Biotechnology and Forensic Biology and Dr. Sean McCormick)
"Determination of Pesticide and Herbicide Concentrations in MecostaCounty Recreational Waters using GCMSStudent"
-
- 70. Tiffany Newman, Ferris State University** **Biotechnology**
(Co-Authors: Dr. Sean McCormick)
"The Assessment of Volatile Organic Compounds in Mecosta County Recreational Waters Using GCMS"
-
- 71. Monica Pavlack, Ferris State University** **Biotechnology**
(Co-Authors: Sean McCormick)
"Assessment of Waterborne Pathogens in Mecosta County Recreational Waters using q-PCR"
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72. Abby VanDusen, Ferris State University (Co-Authors: Julia Quindlen; Victor Barocas, PhD) <i>"Discrimination of Complex Vibrotactile Stimuli"</i>	Biotechnology
73. Courtney Wernette, Ferris State University (Co-Authors: Jaime Stafford, Sophia Chaudhry, Nancy Levin, Michael Tainsky) <i>"Analyzing Variants of Unknown Significance in Hereditary Ovarian Cancer Patients"</i>	Biotechnology
74. Audrey Arbogast, Grand Valley State University (Co-Authors: Anna Barry, Eric Moore, Dawn M Clifford Hart) <i>"Analysis of Mid1 Dephosphorylation by Dis2, a PP1 Phosphatase, during Cytokinesis"</i>	Cell and Molecular Biology
75. Brooke Armistead, Grand Valley State University (Co-Authors: Madeleine Lenski ¹ , Andrea Siguenza ¹ , Nigel Paneth ^{1,2} , Sok Kean Khoo ³ ; ¹ Dept. of Epidemiology & Biostatistics, ² Dept. of Pediatrics & Human Dev; ^{1,2} College of Human Medicine, Michigan State Univ., ³ Dept. of Cell and Mol Bio, Grand Valley State Univ.) <i>"Molecular Biomarkers for Early Detection of Cerebral Palsy"</i>	Cell and Molecular Biology
76. Andrew Freiman, Grand Valley State University (Co-Authors: Margaret Dietrich) <i>"miRNAs derived from retrotransposon sequences may be responsible for a P. patens mutant phenotype"</i>	Cell and Molecular Biology
77. Trevor Guida, Grand Valley State University <i>"Investigation of TNFRSF1A (tumor necrosis factor receptor super family member 1A) gene expression in children with typhoid fever"</i>	Cell and Molecular Biology
78. Emma Hahs, Grand Valley State University (Co-Authors: Sok Kean Khoo faculty mentor) <i>"Effects of microRNA 34b/c in SH-SY5Y cells for Parkinson's disease study"</i>	Cell and Molecular Biology
79. Johnathan Hall, Grand Valley State University (Co-Presenting Authors: Zachary Klamer) (Co-Authors: Agnieszka Szarecka) <i>"The Role of Trp222 Dynamics in the Improvement of Carbapenem Binding to OXA-66 β-lactamase Mutants"</i>	Cell and Molecular Biology
80. Michael Michalski, Grand Valley State University (Co-Authors: Dr. Sheila Blackman, Dr. Jennifer Winther) <i>"The Effect of Intercropping White Clover on Aspects of Soil Ecosystem Function in Small Scale Market Gardens"</i>	Cell and Molecular Biology
81. Aaron Orellana, Grand Valley State University (Co-Authors: Dr. Matthew Christians) <i>"Determining the role of the amino terminal portion of the Light Regulating BTB E3 ligase in Arabidopsis thaliana"</i>	Cell and Molecular Biology

82. Luke Pardy, Grand Valley State University (Co-Authors: Robert Smart, William Schroeder, Osman V. Patel) <i>"Neoadjuvant Treatment with BIBR1532 Inhibits Proliferation of Triple-Negative Breast Cancer Cells"</i>	Cell and Molecular Biology
83. Madison Schmidtman, Grand Valley State University (Co-Authors: Ashley DeWitt, Gabrielle Foxa, Dawn Clifford Hart) <i>"Investigating the interaction between Mid1 and Imp1 in Schizosaccharomyces pombe"</i>	Cell and Molecular Biology
84. Zaineb Shatawi, Grand Valley State University (Co-Authors: Robert Smart, William Schroeder, Osman V Patel) <i>"Nucleoside versus a non-nucleoside reverse transcriptase inhibitor treatment for endometrial cancer: A preliminary study"</i>	Cell and Molecular Biology
85. Kali Smolen, Grand Valley State University <i>"Exploring the auxin-based degron system for the study of protein phosphatases PP2A and PP4"</i>	Cell and Molecular Biology
86. Madison Spratt, Grand Valley State University (Co-Authors: Jessica Thoe, Dawn M. Clifford Hart) <i>"Characterizing Effects Of Overexpressed Polarity Kinase Orb6 on Contractile Ring Proteins in S. pombe"</i>	Cell and Molecular Biology
87. Sieun Ruth Lee, Hope College <i>"Characterization of Cardiomyocyte Differentiation Involving HLHS hiPS Cells Harboring a Mutation in the Promoter Region of NOTCH1"</i>	Cell and Molecular Biology
88. Stephanie Andrews, Lansing Community College (Co-Presenting Authors: John LaFreniere, Alisha Williamson) (Co-Authors: Melinda Wilson) <i>"Identification of Invasive Plant Species using DNA Barcoding"</i>	Cell and Molecular Biology
89. Amy Kobylarz, Western Michigan University (Co-Authors: Justin B. Hackett and Yan Lu) <i>"The role of an RNA recognition motif-containing protein in plastid RNA editing"</i>	Cell and Molecular Biology
90. Emily Ingalls, Grand Valley State University (Co-Authors: Dr. Laurie Witucki) <i>"Synthesis and Activity of FAK Substrate and Inhibitor Peptides Based on p130cas"</i>	Chemistry
91. Megan Aardema, Calvin College (Co-Authors: Douglas A. Vander Griend, Ph.D.) <i>"Assembly Process of the Supramolecular Nanojar"</i>	Chemistry
92. Jacob Bruinius, Calvin College <i>"Synthesis of Novel Antibacterial Agents Targeting Bacterial Topoisomerases: 8-Methoxy & 8-Chloro Fluoroquinolones"</i>	Chemistry

93. Abigail Frndak, Calvin College (Co-Authors: Dr. Carolyn Anderson) <i>"Synthesis of N-Alkenylated 2-Pyridone Containing Isoquinoline Alkaloids"</i>	Chemistry
94. Robert Hohlman, Calvin College <i>"Synthesis of Novel Antibacterial Agents Targeting Bacterial Topoisomerases: 6,8-Difluoro Fluoroquinolones"</i>	Chemistry
95. Nathanael Kazmierczak, Calvin College (Co-Authors: Douglas A. Vander Griend-Faculty Mentor) <i>"Modeling Error in Equilibrium-Restricted Factor Analysis"</i>	Chemistry
96. Evan Romero, Calvin College (Co-Authors: Dr. Carolyn E. Anderson) <i>"Synthesis of N-Alkenyl 2-Pyridonyl Ethers via a Au(I)-Catalyzed Rearrangement of 2-Propargyloxy pyridines"</i>	Chemistry
97. Lucas VanLaar, Calvin College (Co-Authors: Roger L. DeKock) <i>"Atomic Screening Constants and Effective Nuclear Charge"</i>	Chemistry
98. Lea Wassink, Calvin College (Co-Authors: Mentor: Dr. Michael Barbachyn) <i>"Synthesis of Novel Antibacterial Agents Targeting Bacterial Topoisomerases: 8-Methyl & 8-Desmethyl Fluoroquinolones"</i>	Chemistry
99. Joy Yoo, Calvin College (Co-Authors: Professor Mark Muyskens, Joshua Howard) <i>"Fluorescence of Scopoletin and Other Related Coumarins"</i>	Chemistry
100. Emily Zerull, Calvin College (Co-Authors: Dr. Carolyn Anderson) <i>"Synthesis of Substituted Indolizine Structures via Au(I) and Pt(II) Catalysis"</i>	Chemistry
101. John McAfee, Aquinas College <i>"Relationship between Biaryl Ligand Structure and Reactivity in Under-Air Direct Arylation"</i>	Chemistry
102. Jacob Jansen, Hope College (Co-Authors: Katherine M. Reed, Gabriella D. Dyke, Kathryn N. Trentadue, Caroline E. Gregerson, Christian B. Otteman, Jessica Stachowiski, Janelle K. Kirsch, Eric J.T. Phipps, and Jeffrey B. Johnson) <i>"Carbon-Carbon Single Bond Activation Used for Coupling with Michael Acceptors"</i>	Chemistry
103. Aleksandra Masiak, Hope College (Co-Authors: Brandon C. Derstine, Sean R. Gitter, Matthew L. Smith, Jason G. Gillmore) <i>"Long Wavelength Azo Dye Monomers for Photomechanical Applications"</i>	Chemistry

104. Ethan Gormong, Indiana Wesleyan University (Co-Authors: Dr. Steven Tripp) <i>"Covalent Incorporation of Antibacterial Agents onto Monomeric Substrates for Polymer Studies"</i>	Chemistry
105. Annah Kalb, Indiana Wesleyan University <i>"Development of Selective and Potent Bivalent Inhibitors of the Phosphatase Shp2 Using a Chemical-Genetic Technique"</i>	Chemistry
106. Renae Secrest, Indiana Wesleyan University <i>"Searching for a cure – novel therapeutic approach targeting DIPG through FDA-approved drug screen"</i>	Chemistry
107. John Bailey, Kalamazoo College (Co-Authors: Tayeb Kakeshpour, James E Jackson) <i>"Modulation of Hydrogen Bonding via Aromaticity"</i>	Chemistry
108. Christi Cho, Kalamazoo College (Co-Authors: Sarah Glass, Victoria Osorio, Dr. Laura Furge, Ph.D) <i>"Investigation of the Inactivation of 2D6 *1 and *53 and One Active Site Mutant, T309A, by a Known Mechanism-Based Inactivator SCH 66712"</i>	Chemistry
109. Rachel Fadler, Kalamazoo College (Co-Authors: James R. Dobscha, Henry D. Castillo, Steven L. Tait, Amar H. Flood*) <i>"Organic Photovoltaics: Synthesis and Self-Assembly of Novel Tricarbazolo Triazolophane Macrocycles"</i>	Chemistry
110. Christina Keramidas, Kalamazoo College (Co-Authors: Dwight Williams) <i>"Synthesis and Biological Evaluation of 2-(2-Phenylethyl)Chromone Analogues as Neuroprotective Agents"</i>	Chemistry
111. Collin Steen, Kalamazoo College (Co-Authors: Brandon Schabes, Geraldine L. Richmond Ph.D.) <i>"Spectroscopic and Thermodynamic Investigations of a Mixed Surfactant/Polymer System at the Oil-Water Interface"</i>	Chemistry
112. Myles Truss, Kalamazoo College (Co-Authors: Saheem Zaidi, Yan Zhang, and Dwight A. Williams) <i>"Design and Synthesis of 5-Hydroxy-2-(3-phenylpropyl)chromones as Non-Nitrogenous Ligands for the Serotonin Receptor 2 Family"</i>	Chemistry
113. Grace Hubbell, Lake Superior State University (Co-Authors: Alyssa A. Ellsworth, Alexei Iretskii, R. Adam Mosey) <i>"Diastereoselective Formation of Bicyclic Annulation Products from the Interaction of 2-Imidazolines with Amino Acid Derivatives"</i>	Chemistry
114. Raoul Wadhwa, Kalamazoo College (Co-Authors: Dr. Regina Stevens-Truss Faculty mentor/co-author) <i>"An interdisciplinary investigation of antimicrobial peptides"</i>	Computational Biology / Bioinformatics

<p>115. Amanda Ismail, Cornerstone University (Co-Presenting Authors: Katie J. Smallman) (Co-Authors: Katie J. Smallman, Dr. Rob Keys) <i>"Undergraduate] Study of behavioral patterns in correlation to habitat usage between the Black-footed cats at the John Ball Zoological Gardens."</i></p>	Ecology and Evolution
<p>116. Na Young Kim, Kalamazoo College <i>"The impact of herbivory on algal community assemblage considering the ongoing climate change at Rottneest Island, Western Australia"</i></p>	Ecology and Evolution
<p>117. Kwamina Otseidu, Michigan State University (Co-Authors: Donald Seyfried, Frank W. Telewski and Jameel Al-Haddad) <i>"The Effects of Seasonality on the Biomechanics of Pinus strobus"</i></p>	Ecology and Evolution
<p>118. Matthew Boelens, Calvin College (Co-Authors: Professor Aubrey Sykes) <i>"Pressure Drop Through Tube Bundles"</i></p>	Engineering
<p>119. Timothy Bosch, Calvin College (Co-Authors: Dr. Aubrey Sykes) <i>"Design of a water supply for Calvin Gardens"</i></p>	Engineering
<p>120. Shurjo Maitra, Calvin College <i>"Design of Solar Power System Demonstration Unit"</i></p>	Engineering
<p>121. Temitope Ogunnoiki, Calvin College (Co-Presenting Authors: Chinelo Ezenwelu) (Co-Authors: Professor Aubrey Sykes) <i>"Applications of Piezoelectric Technology for Renewable Energy"</i></p>	Engineering
<p>122. Justin Hanselman, Hope College (Co-Authors: Dr. Benjamin Kopek) <i>"A Cost-Effective Design for Super-Resolution Fluorescence Microscopy"</i></p>	Engineering
<p>123. Rylan Prafke, Hope College (Co-Authors: Dr. Jeniffer Hampton) <i>"Response of Surface Bound Hexacyanoferrate Films to Binary and Ternary Metal Alloys"</i></p>	Engineering
<p>124. Corrine Zeeff, Michigan State University (Co-Authors: Jason Smith, Dr. Steven Safferman) <i>"Effects of Timing of Application on Fate of Nutrients for Winter Manure Spreading"</i></p>	Engineering

125. Michael Hindy, Cornerstone University (Co-Presenting Authors: Travis Mangione) (Co-Authors: Dr. Robert Keys) <i>"Vegetative effects on grassland bird biodiversity in Southwest Michigan"</i>	Environmental Biology
126. Eric Glass, Michigan State University (Co-Authors: Karl C. Alcover, Hui G. Cheng, and James C. Anthony) <i>"An Epidemiological Assessment of Possible Synar Amendment Effects on Tobacco Use Onset Ages"</i>	Epidemiology & Biostatistics
127. Jacob Towne, Aquinas College (Co-Authors: Dr. Mary Clinthorne) <i>"The Changing Agricultural Landscape of Kent County"</i>	Geography
128. Maria Maguire, Aquinas College (Co-Authors: Dr. Joseph Spencer) <i>"Mancala Movement"</i>	Mathematics
129. Tristen Spencer, Aquinas College (Co-Authors: Dr. Michael McDaniel) <i>"Revenge of the Circle Squarers"</i>	Mathematics
130. Sarah Strikwerda, Calvin College (Co-Presenting Authors: Joyce (JuHye) Park) (Co-Authors: Hyunyi Jung, Jill Newton) <i>"Pre-service Teachers' Perspectives on Their Opportunities to Learn about Algebra"</i>	Mathematics
131. Jonathon Richards, Grand Valley State University (Co-Authors: Dr. Georgette Sass) <i>"Telomeres as Biological Currency: Why Those With Older Fathers Have a Greater Inheritance"</i>	Microbiology
132. Shaowen Xu, Grand Valley State University (Co-Authors: Adam Pickrum, Jordan Zhou, Steve Wilkinson, M. Aaron Baxter) <i>"Identifying O₂-sensing Regulators for E. coli Biofilm Formation via Transposon Mutagenesis"</i>	Microbiology
133. Jennifer Baker, Indiana Wesleyan University (Co-Authors: Austin Newell, Carli J. Riester, Blair Skinner, Wesley D. Swingley, Michael T. Madigan, Robert E. Blankenship, Jeffrey W. Touchman, and W. Matthew Sattley) <i>"Draft genome sequence of Rhodoferrax antarcticus ANT.BR, a cold-adapted purple nonsulfur bacterium from an Antarctic microbial mat"</i>	Microbiology
134. Bilyana Petkova, Hillsdale College (Co-Authors: Dr. Francis Steiner) <i>"Analysis of the Amylase-Binding-Protein A (AbpA) Activity via Phage Display"</i>	Microbiology

135. Ather Tabook, University of Michigan	Microbiology
<i>"Quantitative Measurements of the Production of Lactic Acid by Two Strains of Lactic Acid Bacteria"</i>	
136. Leah Thompson, Ferris State University (Co-Authors: Jaqueline Peacock)	Molecular Diagnostics
<i>"Development of a reliable, inexpensive molecular-based test and instruction module for blood type testing"</i>	
137. Emily Crombez, Central Michigan University	Neuroscience
(Co-Authors: Joshua Keene, Megan Altemus, Lauren Madsen, Jamie Johansen, Yannick Marchalant)	
<i>"Influence of Neuroinflammation in the LRRK2 mouse model of Parkinson's Disease"</i>	
138. Matthew Fini, Central Michigan University	Neuroscience
(Co-Authors: Srinageshwar B, Stewart A N, Dr Swanson D, Dr Dunbar G L, Dr Sharma A, Dr Rossignol J)	
<i>"In vitro distribution and effects of PAMAM dendrimers on Glioma 261 cells derived from mice"</i>	
139. Rachel Bomya, Grand Valley State University	Neuroscience
(Co-Authors: Kevin Mittner, Deseree Eudave, Elizabeth Flandreau, PhD)	
<i>"Impact of High Fat or High Sucrose Diet on Food Intake and Body Weight in Mice Exposed to Social Defeat Stress"</i>	
140. Deseree Eudave, Grand Valley State University	Neuroscience
(Co-Authors: Kevin Mittner, Elizabeth I.M. Flandreau, PhD)	
<i>"Effects of Diet on Sensitivity to Social Defeat Stress in Mice"</i>	
141. Tyler Dempsey, Hope College	Neuroscience
(Co-Authors: Aaron O'Meara, Brandon Ellsworth, Gerald Griffin)	
<i>"The 1-42 Isoform of Amyloid Beta Reduces Cell Viability of Salmonella enterica"</i>	
142. Garrett Fogo, Hope College	Neuroscience
(Co-Authors: Alyssa Goodwin, Ohanes Khacherian, Brandi Ledbetter, and Andrew J. Gall)	
<i>"Effects of light and ambient temperature on wheel-running behavior in a diurnal rodent, the Nile grass rat"</i>	
143. Alyssa Goodwin, Hope College	Neuroscience
(Co-Authors: Ohanes Khacherian, Laura Teal, Andrew J. Gall)	
<i>"Effects of superior colliculus (SC) lesions on circadian rhythms and masking in diurnal grass rats"</i>	
144. Stephanie A. Simko, Hope College	Neuroscience
(Co-Authors: Jacob Johnson, Guillermo Flores, Allison Kleppinger, Dr. Christopher C. Barney, Dr. Leah A. Chase)	
<i>"Exposure to homocysteic acid early in postnatal development leads to a mixed depressive/manic behavioral phenotype"</i>	
145. Noah PreFontaine, Calvin College	Pharmacology
(Co-Authors: Donald Zeilenga, Jeff Magalski)	
<i>"Perrigo: Integration of Fully Automated Dissolution in New Product Development of Solid Dosage Pharmaceutical Products"</i>	

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- 146. Meghan Burgess, Ferris State University** **Pharmacology**
(Co-Authors: Mohamed Bazzi, Dr. Minji Sohn)
“National trends in antipsychotic polypharmacy with US youth: regimens, demographics, and diagnoses”
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- 147. Conner Stevons, Adrian College** **Physics**
“Programming Arduino to Control Bias Voltages to Temperature-Dependent Gamma-ray Detectors aboard TRYAD Mission”
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- 148. Andrew Folkerts, Calvin College** **Physics**
(Co-Authors: Aaron F. Abma, Brian C. Seperand Paul E. Harper)
“Structural and kinetic studies of the cubic and hexagonal phases of MnO”
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- 149. Kenton Greene, Calvin College** **Physics**
(Co-Authors: Dr. Larry Molnar, Professor of Physics and Astronomy, Calvin College)
“The Dynamics of the Algol Triple Star System”
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- 150. Jason Gombas, Hope College** **Physics**
“Refining the r-process with the SuN Detector at the National Superconducting Cyclotron Laboratory”
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- 151. Scott Joffre, Hope College** **Physics**
(Co-Authors: Dr. Jennifer R. Hampton)
“Characterization of Cation Intercalation in Surface Bound Prussian Blue Analogues”
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- 152. Anna Lunderberg, Hope College** **Physics**
(Co-Authors: Dr. Jennifer Hampton)
“Exploring the Effects of Copper on Composition and Charge Storage of Prussian Blue Analogue Pseudocapacitors”
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- 153. Alec Nelson, Hope College** **Physics**
(Co-Authors: S. K. Remillard)
“Two-Dimensional Imaging of Intermodulation Distortions in a Superconductor Resonator”
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- 154. James Jabara, Michigan State University** **Physiology - Pre-Med**
(Co-Presenting Authors: Auguste Niyibizi)
(Co-Authors: Sophia M. Potter, Chris J. Lahr, Christian R. Gomez, Rebecca H. Lahr)
“Harnessing drop coat deposition Raman spectroscopy for non-invasive cancer diagnosis”
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- 155. Heather DeBoer, Hope College** **Psychology**
(Co-Presenting Authors: Shelby Buikema, Allison Johnson, Carolina Marshall)
(Co-Authors: Samuel Kuiper, Kyle Mullin, Reagan Spindler, Dr. Alyssa Cheadle, Dr. Andrew Gall)
“Use of Daily Diary Methods to Investigate Associations of Religious, Spiritual, Sleep, and Health Behaviors”
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156. Trechaun Gonzalez, Hope College (Co-Authors: Elliott Johnson, Lindsey Root-Luna, Charlotte vanOyen-Witvliet, Gerald D. Griffin) <i>"Oxytocin Receptor Gene Variation and Forgiveness"</i>	Psychology
157. Morgann Brafford, Michigan State University (Co-Authors: Stephanie Nawyn) <i>"Assistance Gaps and Legal Loopholes: Failures of Counter-Human Trafficking Policy"</i>	Psychology
158. Ryley Mancine, Michigan State University (Co-Authors: Katherine Thakkar) <i>"Relationship between cannabis usage and clinical status in individuals receiving treatment for early psychosis."</i>	Psychology
159. Heidi Nykamp, Calvin College (Co-Presenting Authors: Jooyoung Kong) (Co-Authors: Herb Fyneweaver) <i>"Research-based teaching at Kathmandu University"</i>	Science Education
160. Alexandra Bogner, Calvin College (Co-Authors: Dr. Rachael Baker) <i>"The Role of Ubiquitination in Ras Signaling"</i>	Biochemistry
161. Cambrynne Rietberg, Calvin College (Co-Authors: Dr. Rachael Baker) <i>"Isoform-Specific Regulation of Ras by Monoubiquitination"</i>	Biochemistry
162. Tatiana Coverdell, Hillsdale College (Co-Authors: Glen Alberts, Dr. Steve Triezenberg) <i>"Effects of Different ROCK2 Inhibitors on the Lytic Infection Cycle of Herpes Simplex Virus Type 1"</i>	Biochemistry
163. Micah Warners, Calvin College (Presenting Co-Authors: Leira Lew) (Co-Authors: Dr. Gail Heffner and Dr. David Warners) <i>"The Green Team and the Restoration of Plaster Creek"</i>	Biology
164. Philip Simonton, Calvin College	Biology
165. Jenna Van Donselaar, Calvin College (Co-Authors: Max DeYoung, Benjamin Naghtin, Dr. David Warners, and Deanna Geelhold) <i>"Ecological Restoration of the Plaster Creek Watershed"</i>	Biology
166. Jaden Shirkey, Ferris State University (Co-Authors: Paloma Gil-Rodriguez and Matthew Buck) <i>"The Isolation and Characterization of EphA2 Intracellular Domains"</i>	Biotechnology

167. Terryce Nederhood, Calvin College

Chemistry

“X-Ray Diffraction Evidence for Cysteine-Tyrosine Crosslinks”

168. Chris Dilley, Calvin College

Computer Science

(Co-Authors: Professor Joel Adams, Patrick Crain, Mark Vander Stel)

“TSSL: A thread-safe graphics library for teaching students about parallel computing”

169. Adam Hildbrands, Calvin College

Chemistry

“Investigation of Tyrosine-Cysteine Crosslinks in a Model Protein”
