

The students, faculty, and staff of Introductory Biology 151 and 152 would like to thank all the members of the University of Wisconsin Research Community who have served as mentors to our undergraduates this year.

This is a great demonstration of how research supports and promotes undergraduate education on the UW Madison campus. The opportunities you provide undergraduates are unique and very valuable.

It is not an exaggeration to say that this experience has changed the future direction and outlook of many of our undergraduates. Our students consistently note that the experience is among the best and most valuable they have had during their university careers. We know this would not be the case without the generous amounts of time, resources, and effort that you put into this program.

Thank you again,

*Kerry Martin,
Brian Parks,
Megan Pease,
and Carlos Peralta
Course Coordinators,
Introductory Biology 152*



Introductory Biology 152 Mentored Research Poster Presentation

*Tuesday May 6, 2008
Great Hall
Memorial Union
5:00 PM – 7:00 PM*



BIO 152
MENTORED POSTER
SESSION
SPRING 2008

Why involve undergraduates in mentored research?

“It is clear that the academic community regards the involvement of undergraduate student majors in meaningful research . . . with faculty members as one of the most powerful of instructional tools.” (NSF, 1989)

“The Standards call for more "science as process," in which students learn such skills as observing, inferring and experimenting. Inquiry is central to science learning.” (National Science Standards, 1995)

“To successfully undertake careers in research after graduation, students will need scientific knowledge, practice with experimental design, quantitative abilities, and communication skills. . . . All students should be encouraged to pursue independent research as early as is practical in their education.” (Bio2010, 2003)

When did we begin the mentored research option in Introductory Biology 152?

Since 1983, we have been engaged in a program designed to support entry of sophomores into research opportunities on the UW Madison campus.

From 1996 to present we have had more than 2500 students engaged in mentored research projects.

How do our students rate the experience?

One of my most valuable undergraduate experiences	31.1%
Very valuable	31.1%
Valuable	24.4%
Somewhat valuable	8.90%

What do our students say about the experience?

“If you think you may want a job in research, definitely do the mentored research option. . . The knowledge you gain by doing it is something you can't get any other way; you have to experience mentored research for yourself. It's a valuable experience and opportunity.”

“Do not be intimidated by the sound of research. Even if you have never set foot in a research lab before, this is a project worth trying. The great thing about this project is that it is a guided project. This means that you always have someone in your research lab to turn to for answers.”

“Don't limit yourself to what you chose. I did biological field research. I didn't even really know what field research involved but doing something unusual gave me a good idea about how broad the field of biology is.”

“Be prepared to learn a lot! Make sure to keep good notes, and write down procedures and daily experiments in a log book. Be ready to dedicate a lot of time, and know that some weeks may be busier than others. Be patient, and focus foremost on communicating things with your graduate student and/or PI. Don't be afraid to ask questions if you don't understand how to do something or to question why to do something.”

“Although I don't know how truly accurate this assumption is, it seems to me that a large majority of students who start college interested in a science career (or science careers most closely related to biology) come with the intention or goal of medical school. This is not always because they have a great passion for patient care or giving back, but it's because that's the career teachers and peers recommend to a highly motivated student interested in science. That is, at least, the case for myself. . . Once in a lab, I was opened up to an entirely new “research culture ” that I found incredibly fascinating. I have since found that I'm far more interested in research than I would be in medicine... I really thank the experience for opening me up to that world.”

College of Agriculture and Life Sciences

Department of Agronomy

1	Laura Bagley	Influence of native promoters in characterization of CASTOR and POLLUX in <i>Medicago truncatula</i>	Jean-Michel Ane and Muthusubraman Venkateshwaran
2	Anthony Desotell	The effects of media composition on somatic embryogenesis and the regeneration of fertile plants from embryogenic Hi II AxB maize callus	Heidi Kaeppler and Mary Ann McGill
3	Juan Fabela	The function of the HMGR1 protein in plants	Jean-Michel Ane and Dhileepkumar Jayaraman
4	Benjamin Reimer	Characterization of the filter region of the putative ion channel DMI1 (Does not Make Infections 1) involved in legume nodulation and arbuscular mycorrhization	Jean-Michel Ane and Muthu Venkateshwaran
5	Kriti Rishi	Investigating symbiotic interactions between arbuscular mycorrhizal fungi and bioenergy crops and primitive plants.	Jean Michel Ane and Arijit Mukherjee
6	Abigail Smith	Identification of homozygous T-DNA insertion mutants in nuclear pore protein 133 of <i>Arabidopsis</i>	Jean-Michel Ane and Désirée den Os

Department of Animal Sciences

7	Rodney Burayidi	Titin (Protein)	Marion Greaser
8	James Campbell	Anti-inflammatory properties of dietary casein reduce the incidence, delay the onset, and decrease the severity of autoimmune collagen-induced arthritis	Mark Cook and Shane Huebner
9	Claudia Hardie	Identification of quantitative trait loci associated with twinning in dairy cattle	Brian Kirkpatrick
9	Lydia Hardie	Identification of quantitative trait loci associated with twinning in dairy cattle	Brian Kirkpatrick
10	Liz Ince	Skeletal growth and bone mechanical properties in young pigs fed diets with n-3 fatty acids supplied by flax seed	Thomas Crenshaw
11	Peter Kelly	Ethanol increases apoptosis in hES cell-derived neural precursors	Gabriela Cezar

12	Mee Jee Lee	Development and mineral content of molars from young swine (<i>Sus scrofas</i>) fed diets fortified with either Omega-3 (n-3) or Omega-6 (n-6) fatty acids from flax seed	Thomas Crenshaw and Debra Schneider
13	Amanda Murdoch	Maternal dietary conjugated linoleic acid alters embryonic growth and fatty acid profile of the developing chick during the last 7 days of incubation	Mark Cook and Vanessa Leone
14	Amy Pechacek	Using PCR to identify the sex of a bovine embryo	Brian Kirkpatrick
15	Evan Peissig	Cortisol levels in stressed tilapia	Terence Barry
16	Xuejiao Tian	The effect of 17 Beta-Trenbolone on fathead minnow embryonic and larval development	Terence Barry
17	Melvin Zenner	Feed preferences with diets containing ammonia chloride or a blend of anionic salts	Tom Crenshaw
18	Andrew Zuehlke	Synthesis of iron nanoparticles for nuclear magnetic resonance imaging	Ralph Albrecht

Department of Bacteriology

19	Luke Fenlon	Identifying protein variants of HisA	Diana Downs and Mark Koenigskecht
20	Kristina Nairn	Catalase activity not evident in the archaeal methanogen, <i>Methanobrevibacter smithii</i> .	Paul Weimer
21	Dane Nelson	Detection and quantification of omega in RNA polymerase complexes in vitro and in vivo	Richard Gourse and Catherine Vrentas
22	Brittany Pahnke	Examining actinomycete associations with social and solitary wasps	Cameron Currie and Michael Poulsen
23	Andrew Schwartz	The protein purification and functional analysis of <i>Rhodobacter sphaeroides</i> cyclopropane fatty acid synthase	Tim Donohue and Rachelle Stenzel Lemke
24	Nathaniel Shekem	Effect of sodium azide on DNA synthesis in <i>Escherichia coli</i> SecA and ATPase double mutant	Marcin Filutowicz
25	Shane Speirs	Identification of <i>Xenorhabdus bovienii</i> genes required for colonization of the <i>Steinernema jollieti</i> nematodes	Heidi Goodrich-Blair and Darby Rennecker
26	Emily Welch	PCR random mutagenesis to find more variants of the GlnB protein	Gary Roberts and Yaoping Zhang

Department of Biochemistry

27	Lukas Bane	Common gene mutations found in two isolates of artificially selected ionizing radiation resistant <i>Escherichia coli</i>	Michael Cox
28	Jacqueline Blank	Conversion of various types of biomass to hydroxymethylfurfural.	Ron Raines and Joe Binder
29	Michelle Brenner	The interaction of Jjj1 and Rei1 in 60s ribosomal subunit biogenesis	Elizabeth Craig and Alison Meyer
30	Anthony Cefali	Synthesis of 5-Hydroxymethylfurfural (HMF) from the carbohydrates lactose and galactose in ionic liquid solvents	Ron Raines and Joe Binder
31	James Christiansen	Embryonic hindbrain development and cranial nerves affected by all-trans retinoic acid by monitoring Hef-1	Margaret Clagett-Dame and Danielle Knutson
32	Claire Donovan	Similarities and dissimilarities between NAV2 hypomorphic mutant mouse behavioral phenotypes and behavioral phenotypes seen in neurodegenerative disease mouse models	Margaret Clagett-Dame and Elizabeth McNeill
33	Michael Dreis	Bacterial genetics/biochemistry	Julius Adler
34	Rachel Egger	Mapping early flowering genes ef41 and E6-60 in <i>Arabidopsis thaliana</i>	Richard Amasino and Mark Doyle
35	Jeremiah Gerdin	Developing a genetics and evolution teaching module for use in K-12 and undergraduate classrooms	Richard Amasino and Scott Woody
36	Laura Goeser	Something having to do with polyphenols in cranberries and their effects on the toxicity, adherence, and other properties of <i>E. coli</i>	Sebastian Bednarek and Walter Hopkins
37	Ryan Gries	Optimizing expression of a large protein (pyruvate carboxylase ~ 120kDa) in bacterial (different <i>E. coli</i> strains) media	W. Wallace Cleland and Tonya Zeczycki
38	Lindsay Hamilton	Characterization of <i>Escherichia coli</i> containing a <i>fimE::IS1</i> insertion for radiation and mitomycin C resistance	Mike Cox
39	Dermot Haughey	The development of a methodology for detection of polycystic ovarian syndrome	John Markley and Fariba Assadi-Porter
35	Mary Kao	Developing a genetics and evolution teaching module for use in K-12 and undergraduate classrooms	Richard Amasino and Scott Woody
40	Elizabeth Karn	Characterizing loci that delay floral initiation in a natural population of <i>Arabidopsis thaliana</i>	Richard Amasino and Rachel Rodman

41	Ryan Karsten	A novel method for determining isotopic enrichment in complex solutions by Iso-TOCSY NMR	John Markley and Ian Lewis
42	Heather Kindrachuk	Effects of working with bacteria on the cleanliness of lab space	Brian Fox and Ronnie Frederick
43	Patrick Menden	The structure of GDP-perosamine acetyltransferase and its role in synthesis of a unique deoxysugar	Hazel Holden and Paul Cook
44	Tanner Peelen	Swarm motility variances in <i>Escherichia coli</i>	Doug Weibel and Basudeb Bhattacharyya
45	Andrew Prigge	Repression of mRNA in <i>Xenopus</i> oocytes via a FBF-2/CNOT8 chimera	Marvin Wickens and Laura Opperman
46	Lisa Rantala	Investigation of pathways linking inflammation response and the expression of SCD genes in macrophages	James Ntambi and Xueqing Liu
47	Jennifer Schnacky	The role of GADD153 in 4-hydroxybenzylretinone induced apoptosis in breast cancer cells	Margaret Clagett-Dame and Allyson Anding
48	Charles Starr	Developing methods for producing, isolating, and propagating temperature sensitive mutations in <i>Drosophila</i>	Julius Adler
49	Kaitlin Statz	The functional analysis of an artificial cellulosome	Brian Fox and Abolfazl Arabshahi
50	Pei-Kang Wei	The interaction between elongation factor Rho of <i>E. coli</i> with Psi and YaeO protein in the presence of the elongation complex	Robert Landick and Rachel Anne Mooney
51	Tracy Wilson	Characterization of rnp-8 functioning in proliferation and differentiation in the <i>C. elegans</i> germ line	Judith Kimble and Kyung Won Kim
52	Brandon Wischow	Integration of dwarf mutant genes into a B3 (<i>Brassica rapa</i>) background and assays of the strength and response of the phenotype	Richard Amasino and Scott Woody

Department of Dairy Science

53	Sharanya Dayal	The association between the STAT2 gene and fertilization and embryonic survival rates in Holstein cattle	Hassan Khatib and Valerie Schultz
54	Aryel Miller	Effects of heat damaged alfalfa to NDF digestibility	David K Combs and John Goeser
55	Katie Tontillo	Effects of the STAT 1 bovine trait on fertility in <i>Bos taurus</i> , Holstein cows	Hasan Khatib

Department of Entomology

56	Dale Jacques	A preliminary survey of the bark gnawing beetles of Wisconsin (Coleoptera: Trogossitidae)	Daniel Young
57	Carl Kaiser	Impact of increasing predator diversity on the predation of the Colorado potato beetle— <i>Leptinotarsa decemlineata</i>	Claudio Gratton and Ben Werling
58	Lindsey Mercier	A comparison of the transmission rates of PVY:O and PVY:NO in potatoes by <i>Myzus persicae</i> , <i>Acyrtosiphon pisum</i> , and <i>Aphis glycines</i>	Russell Groves
59	Roshni Patel	Identifying the expression and function of developmentally regulated gene Ae4-328 in <i>Aedes aegypti</i>	Que Lan
60	Jason Servi	The effects of nitrogen fertilization on plant growth, herbivore population dynamics, and predator response	Rick Lindroth and John Couture
61	Caitlin Shanahan	Effects of plant phenotype on microbial communities in the soil	Rick Lindroth and Mike Madritch
62	Carlos Torres	Changes in rates of occurrence of antennal drumming across paper wasp (<i>Polistes fuscatus</i>) colony cycle	Robert Jeanne and Sainath Suryanarayanan
63	Tanya Wallin	Effectiveness of three species of aphids as virus vectors of cucumber mosaic virus in <i>Phaseolus vulgaris</i> (snap beans)	Claudio Gratton and Emily Mueller

Department of Food Science

64	Kam Ching Kwok	The browning process of parmesan cheese in the absence of residual sugars and heat	Scott Rankin
65	Maria Surlanto	Growth study of <i>Lactobacillus casei</i> strains in a plant model system	James Steele and Willyn Tan
66	Bryan Weinstein	Effectiveness of an acetic acid immersion treatment for reducing levels of <i>Escherichia coli</i> O157:H7 on whole-muscle beef roast	Steve Ingham and Kim Wiegand

Department of Forest and Wildlife Ecology

67	John Holzhauser	Environmental health concerns of concentrated animal feeding operations.	Christopher Vaughan
68	Emily Ricks	Scavenger activity at white tailed deer carcasses and associated chronic wasting disease exposure risk	Michael Samuel and Chris Jennelle

Department of Genetics

69	Umnia Abdelrahman	Stressing mutant strains of yeast found in a deletion library to ensure that individually strains have the same phenotype as Msn deletion strains	Audrey Gasch and David Berry
70	Rebecca Bauer	Nonsense mediated mRNA decay is not impaired in the <i>Caenorhabditis elegans eri-1</i> mutant	Philip Anderson and Leah Frater
71	Sadaf Bhimani	Regulating cell-to-cell signaling in fruit flies	Allen Laughon
72	Reuben Hoffmann	Stress response of yeast on a genetic level, in this case applied to ethanol tolerance	Audrey Gasch and Jeff Lewis
73	William Stewart	Changes in the expression of KREB protein during hibernation in ground squirrels	Jerry C P Yin and Thomas Tubon
74	Gabrielle Waclawik	Aequorin gene expression in varying knockout lines of <i>A. thaliana</i>	Michael Sussman and Angela Bewell

Department of Horticulture

75	Jenna Lind	Combining characteristics of <i>Capsicum baccatum</i> varieties for F1 hybrid seeds	James Nienhuis and Nick Howard
76	Edward Portillo	Finding a marker for mitochondrial transformation in <i>Cucumis sativus</i>	Mike Havey and Claudia Calderon
77	Robin Schroll	Molecular characterization of <i>D. syrticus</i> and <i>D. Sahariensis</i> within the genus <i>Daucus</i>	Philipp Simon

Department of Nutritional Science

78	Ariel Rischall	Determination of enzyme usage in Cystic Fibrosis patients based on fat intake and pancreatic function	HuiChuan Lai
79	Amy Felton	Maternal iron inadequacy may exacerbate cerebellar damage after ethanol exposure	Susan Smith and Echoleah Rufer

Department of Soil Science

80	Samuel Eldred	Effects of seed application rates on the interaction between restored native prairie species and invasive species in dewatered sediments following a recent dam removal in southwestern Wisconsin	Nick Balster and Ana Wells
81	Anne Gottwald	Biomass allocation in prairie plants	Nick Balster and Marie Johnston
82	Adom Hinkle	The alkalinity of soil in a nursery	Nick Balster

83	Hyun Kyung Lee	Effect of controlled release fertilization on nitrogen leaching and nutrient use efficiency in red pine seedlings	Nick Balster and Ryosuke Fujinuma
84	Michael O'Halleran	Seasonal and vegetative effects of earthworms in lawns of Madison, WI	Nick Balster and Marie Johnston
85	James Steuck	Understanding the link between climate change and soil processes: An educational resource	Teri Balser and Dolly Ledin

Department of Wildlife Ecology

86	Rachael Colpaert	Effects of diet and age on zebra finch digestive physiology and plasticity	William Karasov and Pawel Brzek
87	Michael Connolly	The effect of diet on ontogeny of zebra finches	William Karasov and Pawel Brzek
88	Erin Mellenthin	Behavior of sloths in family groups and of different generations	Christopher Vaughan

School of Education

Department of Kinesiology

89	Julia Bowers	Bimanual response to ongoing motion perturbations	Andrea Mason
90	Patrick Kurkiewicz	How do various pelvic pressures affect gait?	Kreg Gruben

School of Engineering

Department of Biomedical Engineering

91	Benjamin Ballweg	Keratinocyte alignment on gradients of immobilized growth factors	Kristyn Masters and Tracy Stefonek
92	Kara Barnhart	Degradation of mineralized alginate scaffolds for bone tissue engineering	William Murphy and Darilis Suarez
93	Natasha Benkovich	Microsphere release	William Murphy and Brian Peret

94	Hannah Jansen	Stability and resistance to non-specific protein adsorption of self-assembled monolayers (SAMs) stored under cell culture conditions	William Murphy and Greg Hudalla
95	Ryan Kimmel	Muscle activity with respect to body orientation	Kreg Gruben
96	Calvin Andersen	Significance of collagen synthesis and degradation of extracellular matrix proteins during hypoxia-induced pulmonary vascular remodeling in mice	Naomi Chesler

Department of Chemical and Biological Engineering

97	Hyungjin Kim	Comet formation of VSV(Vesicular Stomatitis Virus) on BHK(Baby Hamster Kidney) cells	Ying Zhu
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Department of Electrical and Computer Engineering

98	Andrew Jandl	Optimization of plasma polymerized surfaces for directed differentiation of endothelial cells from embryonic stem cells	Juda Shohet
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The Graduate School

Department of Molecular Biology

99	Allison Mcarton	Developing a user interface for a biological microscopy database	Kevin Eliceiri and Curtis Rueden
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Primate Research Center

100	Meghan Feeney	Prevalence of osteolytic bone lesions in a colony of captive common marmosets	Sebastian Bednarek and Ricki Colman
101	Zach Mirsky	Vitamin D effects on epiphyseal closure in common marmosets	Ricki Colman and Nancy Schultz-Darken

College of Letters and Science

Department of Botany

102	Sarah Bartlett	Effect of culture solution on growth of <i>Lemna minor</i> in aquatic microcosms	Susan Will-Wolf
103	Jordan Briggs	Charcoal morphotypes created by fires in Hawaii	Sara Hotchkiss

104	Robert Johnson	Predicting how Wisconsin native wetland plants can reduce soil erosion, increase water infiltration, and out-compete invasive species in stormwater management facilities.	Joy Zedler
105	Raman Kuttly	Determination of spurge evolution via molecular analysis of Leafy (<i>LFY</i>) gene sequencing	David Baum and N. Ivalú Cacho
106	Amanda Milford	Commensurate experience and narrative in the humanities and its application to science	Tim Allen
102	Britney Mosey	Effect of culture solution on growth of <i>Lemna minor</i> in aquatic microcosms	Susan Will-Wolf
107	Brent Wittig	Effects of water availability on carbon discrimination in Wisconsin prairie species	Thomas Givnish and Bob Wernerehl

Department of Chemistry

108	Jennifer Choi	Preparation and biophysical characterization of ApoHmpH, a fast-folding bacterial globin	Silvia Cavagnero and Nese Kurt Yilmaz
109	Jamie Snyder	Synthesis of water-oxidation catalyst $[(L)_2(H_2O)Ru^{II}ORu^{III}(H_2O)(L)_2]^{4+}$ (L=2,2'-Bipyridine) and new analogue bis chelate $[Ru(bpm)_2Cl_2]$ (bpm=2,2'-Bipyrimidine)	John Berry and Jozsef Pap

Department of Geology and Geophysics

110	Kathryn Bevington	Use of stable isotope signals to detect depth habitat differences among fossil Foraminifera in Oligocene-aged deep-sea sediments	Clay Kelly
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Department of Psychology

111	Elana Brubaker	The parts of the brain activated under stress in depressed and normal patients when responding to self-referential information.	Richard Davidson and Allison Jahn
112	Tenzin Dhanze	The regulation of emotions to negative visual stimuli by compassion meditation and cognitive reappraisal	Richard Davidson and Helen Weng
113	Amanda Knitter	Physiological correlates of prejudice regulation	Patricia Devine and Leah Zinner
114	michael kruepke	Delay-period neuronal oscillations are modulated by 10Hz rTMS: A simultaneous rTMS/EEG study	Brad Postle and Massih Hamidi
115	Sunyoung Park	Adolescent brain development and neurochemicals measurable by magnetic resonance spectroscopy	Richard Davidson and Brendon Nacewicz

Department of Zoology

116	Ismail Boukahil	The role of dopamine in the reinforcement of aggressive behavior of <i>Peromyscus californicus</i> mice	Cathy Marler and Elizabeth Becker
117	Jesse Cramer	Great egret energetics in Green Bay, WI area	Warren Porter
118	Lisa Daniels	The effects of chemically altered and genetically modified food on the physical activity levels and thyroid hormone blood concentrations of mice	Warren Porter and Julia Haviland
119	Ariel Debroux	Effects of land management on native and invasive species densities in the Lakeshore Preserve	Stanley Dodson
120	Nicholas Ellis	Role of <i>Cap'n'Collar</i> in intervein fate specification during wing development of <i>Drosophila melanogaster</i>	Seth Blair and Dave Olson
121	Christopher Hayes-Birchler	Cv-d interaction in BMP signaling pathways studied in <i>Drosophila</i> crossvein development	Seth Blair and Jun Chen
122	Logan Kiefer	The effect of a specific dopamine D1 receptor antagonist on maternal neglect in mice	Stephen Gammie and Sharon Stevenson
123	Alexandra Ostromecki	The effects of cortagine on maternal aggression in lactating female mice	Stephen Gammie and Sharon Stevenson
124	Zachary Rasor	Gene associated with <i>Drosophila</i> wing veins	Seth Blair and Justin Schleede
125	Mary Roth	Impact of <i>ihog</i> on Hedgehog (Hh) signaling in <i>Drosophila melanogaster</i> maginal wing disc	Seth Blair and Andrei Avanesov
126	Rebecca Wachowiak	Analysis of genes for BMP-driven crossvein development in <i>Drosophila melanogaster</i>	Seth Blair and Justin Schleede
127	Emily Woelfle	The effects of training as a means of environmental enrichment in captive harbor seals	Stanley Dodson
128	Colleen Anderson	Isolated nesting and feeding range have positive effects on osteological pathologies in three species of Galapagos <i>Sulidae</i>	Elizabeth Pillaert

School of Medicine and Public Health

Department of Academic Affairs

129	Irem Duyar	Diabetes education through the use of Conversation Map™: A community based project	Sharon Younkin
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Department of Anatomy

130	Jason Ballweg	Development of a microfluidics-based gradient generator for studying axon outgrowth and guidance	Erik Dent and Yu Huang
131	Ann Chodara	ALS-SOD1 mutations in mouse ES cells	Su-Chun Zhang and Robert Krencik
132	Helena Frischtak	Effect of Wn15a on cytoskeleton during axon outgrowth	Katherine Kalil and Li Li
133	Brian Hibler	Plasma-treated biomaterial effects on the directed differentiation of embryonic stem cells	Gary Lyons and Leon Shohet
134	Dexter Jin	Maintaining a stem cell population in the mouse allantois	Karen Downs
135	Lydia Kotecki	Ca ²⁺ Influx in the transient receptor potential (Trp) channels can inhibit or promote neurite outgrowth in hES cells	Jason Weick and Su-Chun Zhang
136	Patience Oladeinde	Examining the role of Scib in early lens development in the mouse ocular lens	Anne Griep and Idella Yamben
137	Timothy Pian	Growth and differentiation patterns in neural progenitor cells with karyotypic abnormalities	Clive Svendsen and Dhruv Sareen
138	Breanne Schuster	The effect of over-expression of alpha-synuclein on neural survival and differentiation of human neural progenitor cells	Clive Svendsen and Fabin Han
139	Rachel Strykowski	Differentiation of rat cortical stem cells expressing the SOD1 mutation.	Clive Svendsen and Masatoshi Suzuki

Department of Anesthesiology

140	Catalina Dumitrascu	The association of structural proteins Shank1 and Shank2 with neuropathic pain	Vjekoslav Miletic and Gordana Miletic
140	Chris Honstad	The association of structural proteins Shank1 and Shank2 with neuropathic pain	Vjekoslav Miletic and Gordana Miletic
141	Rajeev Krishnaney-Davison	The effect of isoflurane on the NMDA component of fEPSPs in the CA1 region of the hippocampus	Robert Pearce and Dustin Dubois

Department of Biomolecular Chemistry

142	Mark Devries	Metabolomic analysis of SIRT3 regulated metabolic pathways	John Denu and William Hallows
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154	Katherine Munck	Restoration of wild-type phenotype in the genetically interrupted <i>Toxoplasma gondii</i> mutant 97F9 through complementation	Laura Knoll and Angela Pollard
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Department of Communicative Disorders

143	Kevin Shepet	Acoustic and tongue movement characteristics of diphthongs in the speech of normal and dysarthric speakers	Gary Weismer
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Department of Medical Physics

155	Joshua Knackert	Intracerebral transplantation of differentiated human embryonic stem cells to hemiparkinsonian monkeys	Marina Emborg
156	Valmiki Maharaj	Efficacy of using pressure gradient analysis in a Matlab-based computing language for segmenting images in magnetic resonance imaging	Charles Mistretta

Department of Dermatology

144	Mark Berlacher	Role of Plk1 in melanoma progression and survival - regulation of Notch signaling	Nihal Ahmad and Travis Schmit
145	Maura Parnitzke	Disruption of microtubule dynamics in mammalian somatic cells allows cell cycle progression	Vijay Setaluri and Nityanand Maddodi
146	David Rivedal	Analysis of single nucleotide polymorphisms (SNPs) in transient receptor potential melastatin (TRPM1)	Vijay Setaluri
147	Heidi Schmidt	Cigarette smoke and ultraviolet radiation responses on cutaneous cytochrome P450	Hasan Mukhtar and Farrukh Afaq
148	Ashley Mcilquham	MAGE in melanoma	Jack Longley and Neehar Bhatia

Department of Medicine

157	Benjamin Andrew	Quantitation of atrial natriuretic peptide in mCreb mouse model of cardiac hypertrophy	Eugene Kaji
158	Sang Han	Analysis of 8X23 and 23X8 HcB/Dem recombinant congenic strain mice femora	Robert Blank and Neema Saless
159	Alice Jiang	Association of nasal diseases with symptoms of obstructive sleep apnea (OSA) in patients with asthma	Mihaela Teodorescu
160	Samuel Keepman	Effect of dietary restriction on menopause in rhesus monkeys (<i>Macaca mulatta</i>)	Ricki Colman
161	Amy Mahlum	Suberoylanilide hydroxamic acid (SAHA) induced growth inhibition of LNCaP human prostate cancer cells at different levels of reactive oxygen species	George Wilding and Hiram Basu
162	Alyce Marsh	Cytomegalovirus and inflammatory bowel disease: Determining when to suspect and how to confirm active CMV infection	Mark Reichelderfer and Shawn Hancock
163	Sven Olson	Using recombinant congenic mice to detect bone mechanical performance genes	Robert Blank and Neema Saless
164	Caitlin Peters	The effect of calcium and heparin on the half life of factor IXa in plasma	John Sheehan
165	Meghan Reppen	The interaction of Tat binding protein 1 with thyroid hormone receptor	Eugene Kaji
166	Megan Sauer	APOE4 and gender affect CSF biomarker correlation to cholesterol and cognition in adults at risk for Alzheimer's disease	Cynthia Carlsson and Hanna Blazel

Department of Family Medicine

149	Anna Carlson	Breastfeeding in causation and prevention of obesity in children age 2-5	Alexandra Adams and Kate Cronin
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Department of Human Oncology

150	Sukhmani Grewal	Driving with brain tumors	Deepak Khuntia
151	Christopher Magnine	Mechanisms of intrinsic resistance to cetuximab in colorectal cancer	Paul Harari and Deric Wheeler

Department of Medical Microbiology and Immunology

152	Sergio Gallardo	Effects of cAMP levels on phase change in <i>Blastomyces dermatitidis</i>	Bruce Klein and Greg Gauthier
153	Seul Ki Lee	Construction of <i>Aspergillus fumigatus</i> lipoxygenase mutants and phenotypic assay development with a previously characterized mutant, laeA.	Nancy Keller and Taylor Dagenais

Department of Neurological Surgery

167	Margaret Griesemer	Investigation of the effect of HOE 642 inhibitor on neuronal damage in neonatal mice following hypoxia-ischemia	Dandan Sun and Dandan Sun
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Department of Neurology

168	Carlos Gil Del Alcazar	Function of FoxQ1 in the processes of memory and learning	Corinna Burger
169	Heidi Johng	Mutated genes in the cerebral cortex	Zhen Huang

Department of Obstetrics and Gynecology

170	Michael Bohl	Hypothalamic-Pituitary-Adrenal axis responsiveness following chronic stimulation of the serotonin 1A receptor in the female marmoset monkey	David Abbott and Yves Aubert
171	Anna Hopkins	AMH inhibits meiosis II in polycystic ovaries	David Abbott
172	Luba Krichevsky	Drug ZM 336372 inhibits a protein (glycogen synthase kinase 3beta) that is associated with cancer	Steve Rose and Steve Rose
173	Marguerite Maguire	Targetting sub-cellular translocation of eNOS in uterine endothelial cells	Ronald Magness
174	Dhara Patel	The role of siglec-9 binding to MUC 16 contributing to inhibition of NK cells.	Manish Patankar
175	Paj Ntaub Vang	Effects of gum chewing on energy intake and expenditure	Leah Whigham

Department of Oncology

176	Sabrina Burn	Identification of protein binding sites on Smad2 and Smad3 and disruption through competitive binding with SnoN for activation of TGF- β signaling	Michael Hoffmann
177	Cody Fredrick	Breast cancer resistance in the Mcs1c locus	Michael Gould and Jill Haag
178	Kelley Kadunc	Interactions of Pin1 with phosphorylation sites in AF-1 region of estrogen receptor	Elaine Alarid
179	Brittany Lenz	Developing immunohistochemistry techniques for determining localization of AHR	Christopher Bradfield and Susan Moran
180	Caris Markos	Functional characterization of T cell populations following in vitro culture with T cell expander beads in normal donor peripheral blood mononuclear cell	Mark Albertini
181	Matthew Muelbl	Interaction of genetic loci controlling breast cancer susceptibility in the Wistar-Kyoto rat model	Michael Gould and Jill Haag

182	Brittany Peterson	Investigating human papillomavirus type 16 E5's contribution to cervical carcinogenesis in a mouse model	Paul Lambert and John Maufort
183	Cassie Pfeiffer	Canine melanoma and EGCG as an antitumor treatment	David Vail and Mike Huelsmeyer
184	Gavin Stormont	Tumor resistance in Syndecan-1 null mice: Effects of energy metabolism	Caroline Alexander and Caroline Wagner

Department of Ophthalmology and Visual Sciences

185	James Allard	Inducing neurogenesis	Ronald Kalil
186	Alison Crane	Hippocampal neurogenesis: Establishing control rates of neuron proliferation and survival	Ronald Kalil and Rachel Choy
187	Michael Olmsted	Gene expression of nestin expressing neurons in the basal forebrain of rats	Ronald Kalil and Adam Buhalog
188	Alex Thompson	Molecular specificity of RGC-5 cell differentiation by staurosporine	Len Levin
189	Galen Heyne	BrdU implant for stem cell research in cynos	Paul Kaufman and Julie Kiland

Department of Orthopedics and Rehabilitation

190	Nick Clark	Knee, hip and synovial fluid metabolism with and without anabolic therapeutic treatments correlated with patient age, gender and body mass index	Lee Kaplan and Herman Stampfli
191	Tyler Haynes	Using variability in gait characteristics to identify falling risk in the elderly	Bryan Heiderscheidt and Judy Dewane
190	Kaitlyn Laube	Knee, hip and synovial fluid metabolism with and without anabolic therapeutic treatments correlated with patient age, gender and body mass index	Lee Kaplan

Department of Pathology and Laboratory Medicine

192	Maura Foley	Transforming growth factor- β 1 and stromal activation	Andreas Friedl and Gui Su
193	Karina Jordan	Dendritic immunotherapy	Matyas Sandor and Heidi Vonderheid
194	Melissa Taylor	Generation of stable SCC13y clones overexpressing membrane type 1-matrix metalloproteinase for the study of tumor invasion	Lynn Allen-Hoffmann and Erin Gill

Department of Pediatrics

195	Brian Hahn	Blastomyces dermatitidis effect on apoptosis in phagocytes	Bruce Klein and Erika Heninger
196	Ryan Beechinor	Effect of camptothecin (CPT) on alternative splicing	David Wassarman
197	Tyler Gorman	Characterizing cytochrome p450 expression in mice liver tissue between low and high fat diets	Colin Jefcoate
198	Zach Hermes	Polyunsaturated fatty acids and their effect on the subcellular localization of Caveolin-3	Tim Kamp and Jabe Best
199	Matthew Phan	Effects of calcium handling on mice hearts	Hector Valdivia and Joe Scherman

Department of Population Health Sciences

200	Katie Jaeger	Type 1 diabetes	Mari Palta and Tammy LeCaire
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Department of Psychiatry

201	Heeyoon Kim	Individual differences in stress induced amygdala somatostatin receptor expression	Ned Kalin and Patrick Roseboom
202	Stacy Weber	Effects of maternal influenza infection on behavior and neuroendocrine functioning in juvenile Rhesus macaques (<i>Macaca mulatta</i>)	Steven Shelton and Sarah Short

Department of Surgery

203	Jason Carr	Sonic Hedgehog signaling upregulates Notch signaling in prostate	Wade Bushman and Jerry Gipp
204	Julia Dai	The effects of vocal fold scarring on phonation parameters	Jack Jiang
205	Zach Glazer	Developing a tolerance assay for organ transplantation	Zhen Davis
206	Christina Martin	The effects of GSK-3 on tumor growth in pancreatic cancer cells	Herbert Chen and Xueming Xiao
207	Robert Rutkowski	Hemorrhage and sepsis disturbs lung perfusion distribution in rats as measured by statistical analysis of trapping patterns of small diameter fluorescent latex particles in lung capillaries	Robert Conhaim
208	Emily Waselchuk	Pediatric dysphonia: The feasibility of using phonation threshold pressure (PTP) in children with hoarseness	Scott McMurray and Shannon Theis

Department of Surgical Sciences

209	Leah Loehndorf	Myofibroblasts in chronically wounded and spontaneous chronic corneal epithelial defect (SCCED) dog eyes	Christopher Murphy and Simon Pot
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Waisman Center

210	Suzanne Marie Benoit	Differences in Rosenthal fiber formation in the white and gray matter of the brain	Albee Messing
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School of Nursing

211	Lynsey Watry	Newborn screening and cystic fibrosis	Audrey Tluczek
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School of Pharmacy

Pharmacy Practice Division

212	Kevin Stutt	Analysis of three single nucleotide polymorphisms in the epidermal growth factor receptor gene and their role in the effectiveness of genistein	Jill Kolesar
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School of Veterinary Medicine

Department of Comparative Biosciences

213	Ryan Adams	Biochemical differences between Hyper, Drowsy, and CWD adapted prion strains in hamsters	Judd Aiken and Chad Johnson
214	Elizabeth Farley	The role of strain rate in the mechanical activation of mTOR signaling	Troy Hornberger
216	John Frey	Mechanotransduction	Troy Hornberger
215	Brock Radich	The anti-inflammatory effects of ATP in the central nervous system	Jyoti Watters and Maria Nikodemova

Department of Pathobiological Sciences

217	Katherine Pankratz	Development of serological Assay to detect antibody against feline leukaemia (FeLV) to determine true prevalence of FeLV	Ronald Schultz and Laurie Larson
218	Meaghan Stehr	Cloning of a hemolysin-like protein from <i>Biomphalaria glabrata</i> , the intermediate host of the human blood fluke, <i>Schistosoma mansoni</i>	Timothy Yoshino and Nathalie Dinguirard

Department of Surgical Sciences

219	Ryan Collins	Neuronally controlled adaptive response to mechanical loading of long bones	Peter Muir
220	Laura Kim	Finding the optimal stain for counting the number of viable cells on the nano drop	Kelly Mallon and Christopher Murphy

Other Agencies

Neurodynamics Research Corporation

221	Zachrey Rosengarten	Imaging of fibromyalgia biomarkers in white brain matter	Cameron Leith and Lori Siegel
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U.S. Dairy Forage Research Center

222	Jennifer Knack	Increasing hybridity via control of the gametophytic self-incompatibility system in red clover (<i>Trifolium pratense</i>)	Heathcliffe Riday and Andy Krohn
223	Dale Perez	Not submitted	David Mertens

WISPIRG

224	Jenna Rasmusson	Finding alternatives for the pesticides currently used on <i>Campus</i>	Stanley Dodson and Anthony Uhl
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